

The United States

MILLER

AND THE MILLING ENGINEER.

Fifteenth Year.—No. 12.

MILWAUKEE, DECEMBER, 1890.

Subscription Price, \$1.00 Per Year.

"A PLEASURE TO OPERATE THEM"**THE RICHMOND****Grain Cleaning Machinery****AND DUSTERS.****TESTIMONIAL.**LONGMONT FARMERS' MILLING & ELEVATOR CO. }
Longmont, Colo., October 15th, 1890.

RICHMOND MFG. CO., Lockport, N. Y.:

Gentlemen—Thinking that perhaps you would like to hear how we are pleased with the two Bran Dusters recently purchased of you, we take pleasure in saying they are doing more than we hoped for of them, and in the six months we have used them have given us no trouble, whereas the machines which they replaced were a continual source of annoyance.

We now have in operation in our mill: two No. 4 Richmond Horizontal Brush Machines; one No. 4 Richmond Horizontal Scourer; one No. 4 and one No. 5 Richmond Horizontal Bran Duster.

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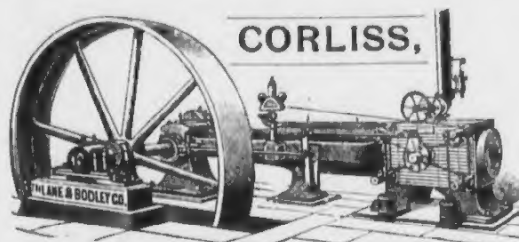
Very respectfully,

LONGMONT FARMERS' MILLING & ELEVATOR CO.

SAM'L FRAZIER, Head Miller.

RICHMOND MANUFACTURING CO.

LOCKPORT, N. Y., U. S. A.

THE LANE & BODLEY CO.,

CORLISS,

MANUFACTURERS OF

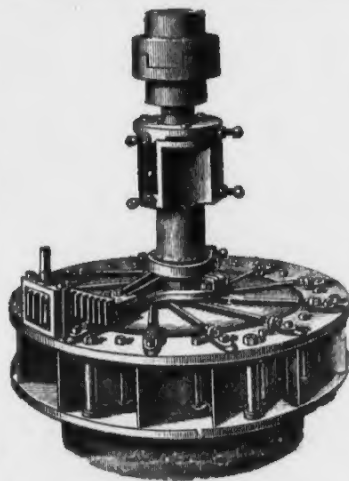
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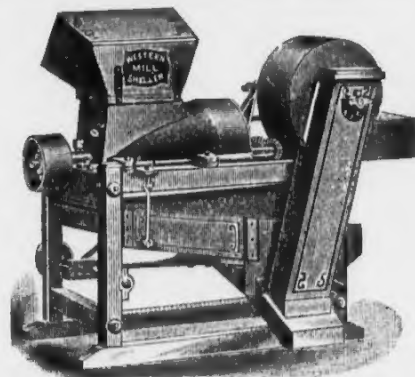
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FOR 1890-1891

It contains: 1. A list of Flour Mills in each State, Territory and Province, with names of owners, P. O. and county; in thousands of instances giving their capacity in barrels per day, kind of power used, etc., also indicating such firms as are supposed to be worth \$10,000 and upwards. Total number of mills given, 17,145.

2. A list of miscellaneous mills, such as Corn, Oatmeal, etc.

3. A list of Millwrights.

4. A list of Grain Elevator Owners and Grain Dealers.

5. A list of well-rated Flour Brokers, Merchants and BAKERS in all parts of the United States and Canada, which has been compiled with extraordinary care, capital and credit being considered in the compilation.

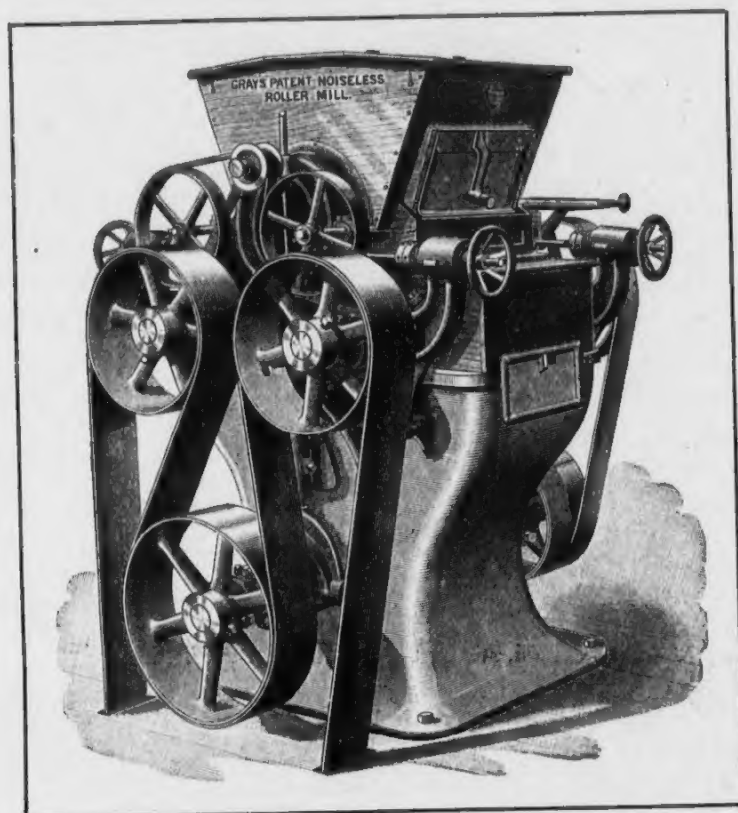
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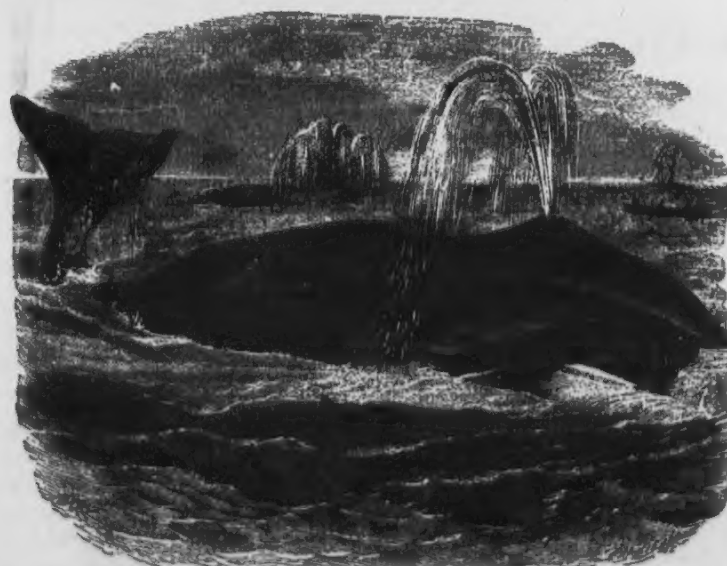
ZEBRA.—*Asinus Zebra*.



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THE HEDGEHOG.—*Erinaceus Europæus*.



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1890-91
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Thoroughly revised to meet all the requirements suggested by members of the Millers' National Association and others; together with new and valuable tables, covering flour invoices at varying prices, for various quantities; also freight tables, figured with inland and ocean rates.

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[Written for the UNITED STATES MILLER AND MILLING ENGINEER.]

FALSE IDEAS OF ECONOMY IN THE EQUIPMENT OF A FLOURING MILL.

By J. F. MUELLER, M. E.

A MODERN flouring mill is now one connected machine, so much so that from the time the wheat is subjected to the first operation, it must travel onward from one grade to another until it is ready for the market. A single hitch of several minutes is apt to disarrange the entire mill. The miller can only be in one particular place at any one time and give it his attention, making such adjustments as are deemed necessary, and then to proceed to the next machine or station of the mill. A great deal of the work is therefore performed in the dark, so to speak.

Planning a mill that will run through the entire day without a single interruption is not such an easy matter as one would suppose. Good plans and diagrams are essential, and most of the mill builders now furnish these in connection with their machinery. When a miller attempts to cut down the proper number of machines, he runs the chance of producing poor results. Better have a moderately expensive outfit at the very start than to keep constantly tinkering, experimenting and "shutting down" for repairs and necessary changes.

With a large majority of millers it is not so much a matter of speculation as to the relative merits of certain outfits and the general arrangement thereof, as it is a matter of price. The mill-builder on the other hand when submitting his proposition along side of various others, is apt to cut down his outfit of machinery as low as he dares, to still remain within the approval of the miller. Some are apt to go so far as to slight both the size and number of machines as well as the power attachments required to make the necessary connections. This frequently takes place in mills of small capacity.

Beginning with the wheat cleaning machinery, we are apt to find but one separator in the mill of small capacity and in many instances none at all. Now, if the larger mills require both receiving and milling separators, it is essential that the smaller mill should be equipped in like manner.

A written contract once came to my notice where a "separator and scourer combined," stretched out as long as words and paper would admit of, constituted the full line of wheat cleaning machinery. This, no doubt, was written out to convey the idea that the machine would perform the entire work of both a separator and a scourer. Few millers are so ignorant as to be led to believe that the separating attachment on a scouring machine is anything more than an aspiration to carry away the scourgings and the inferior grains of wheat. Brush machines are seldom mentioned now-a-days. It is my impression that the reason they are put on the retired list is on account of the usual high price.

In looking over the various specifications of mill furnishing men, we are likely to find a decided variety of sizes of rolls. The relative merits of large and

small diameters as well as long and short surface do not cut as much of a figure in this stage of the mill as price. Rolls are among the expensive machines that enter the mill and the introduction of the smaller diameters was largely due to the demand for cheap machinery—and not on account of any superiority in the quality of work produced. The six inch roll has its place in the mill, and reasonably good work can be performed on it, but the nearer we approach the nine inch, the nearer we get to the proper diameter for accomplishing good results. The greatest crime, however, that can be committed in this connection is to have the rolls too short. Every good miller knows that for good milling, short surface on rolls is the greatest nuisance that can be introduced in any mill.

This "sawed off and hammered down" theory is also frequently carried out in the bolting machinery.

We find reels now-a-days all the way from thirty-two inches diameter down to fifteen inches and even twelve inches. I have heard builders of small reels claim as much for their performance as they do for the larger reels, inasmuch as they run them at a higher speed—the cloth traveling the same number of feet per minute in the small reel as well as in the large one. It is evident that the action of the material in the small diameter reel is anything but a gentle sliding action, and it resembles more the old fashion *hexagon* reels with its cumbersome ribs, to lift up and dash the stock around promiscuously, than it does the principles of a modern bolter.

The danger of getting reels too short is fully as great as getting roll surface too short. The round reel has increased capacity, owing to a larger surface of cloth being in use as well as the application of a brush, to keep the meshes free and open. This increase of capacity is a help toward shortening the reels. The brush in all cases should be a revolving one and adjustable, running at a fair rate of speed. The inter-elevator attachment still further increases the capacity of the reel, and all together the new system of bolting is preferable to the old, only that in some cases they are made too short.

There is no such thing as good milling without good bolting cloths. Is there a manufacturer who doubts that some do themselves injustice by letting their machines go out clothed with poor cloth? No machine, however well designed and constructed, no matter how well adopted for the work set apart for it to do, and no matter how scientifically handled while at work, will do satisfactory execution and keep it up, if clothed with an inferior bolting cloth. While every purchaser does not ask what brand of cloth is to be used on the machine he buys, they are all "dead on to" the machine that is hard on cloth, and they do not stop to ask whether the quick death of the cloth is due to the action of the machine or to the poor quality of the cloth; they simply lay it to the demerit of the machine.

Nearly as much can be said concerning the great variety of elevators put up by various mill-furnishers. A choked down elevator is about as great a nuisance as a choked up spout. An elevator with pul-

leys twenty inches diameter is the best suited for carrying ground material. There are, however, elevators put into new mills of small capacity with pulleys as small as twelve inches in diameter. This I consider too small for any use. Sometimes elevator buckets are used that are entirely too small. There should never be less allowance made than two-thirds of the actual contents of the bucket. Never allow anything less than a three ply cotton belt to be put into an elevator: either a three ply rubber or a four ply cotton for wheat elevators.

Elevator legging can be bought either tongued and grooved or rabbitted at a cost very little more than plain edged boards. Nearly all planing mills have machinery to enable them to turn out the boards either tongued and grooved or rabbitted in fully as short a time as though they were plain boards, after the machine has once been adjusted for the purpose. The small amount of extra lumber required is all that would make the price higher. It is of utmost importance in these days, when leaks cut a big figure in the net profits of a mill, to have all joints as tight as possible.

(To be continued.)

THE WATER SUPPLY IN KANSAS.

THERE has been growing upon those who have studied the plains of Western Kansas the conviction that the success of agriculture in the western third of the State is beyond question a failure unless a more permanent water supply can be obtained. A new theory has been broached, that of irrigation by means of the "underflow" in the river valleys, and it has been tested with remarkable success. In searching for and investigating the water sources, it was discovered that underneath the great valley of the Arkansas, and presumably under all the river valleys of Western Kansas, if not under the plains, lies hidden a vast body of water. The possibility of utilizing this as a source from which to supply the ditches naturally arose, and practical tests have just been completed that prove the entire reasonableness of the theory.

The vicinity of Dodge City, about 100 miles from the Western line of the State in the Arkansas Valley, was selected as the place for the experiment just completed. There was opened a ditch fourteen feet wide, and drifting westward up the valley. The river falls seven feet to the mile, and the ditch was commenced three feet below the surface, and extended westward on a grade of three feet to the mile, which soon brought it below the level of the river bottom.

The ditch was extended until the excavation was found to be twelve feet deep, and six feet below the river bottom. Into the ditch thus dug into the solid earth drained the underflow. So great was the drainage that at the point of beginning a dam was constructed, and the amount of water flowing over it was found to be 30 cubic feet per second.

A ditch was opened easterly along the higher land at a fall of only 17-10 feet per mile so that by the time the ditch reaches a point southeast of Dodge City there is a perpendicular fall possibly of nearly or

quite twenty feet, with a water supply as constant as the everlasting hills, or at least so considered.

The ditch thus far constructed, and which it is believed will furnish a permanent supply the year round, as it was completed at the close of the driest season ever known in Western Kansas, will irrigate about 25,000 acres of land, and has been built at a cost of \$60,000. The proprietors believe that with their experience they could now do the same amount of work for at least \$10,000 less.

THE DANGERS OF ELECTRICITY.

IN a paper read by Professor Henry Morton, before the recent convention of the National Electric Light Association seven rules were given for the protection of those engaged in erecting and operating electrical apparatus involving the use of powerful currents. As these rules have a very wide application, we quote them as follows:

1. Do not touch or handle any electric wire or apparatus of any sort while standing on the ground, or while in contact with any iron work, gas or water pipe, or stone or brick work, unless your hands are covered with rubber gloves and you are provided with such properly insulated tools as have been declared to be safe and in good order by the electrician or other competent officer of the company. If it is at any time necessary to stand on the ground, while handling electric wires and apparatus, rubber boots or an insulated stool should be used. In moving wires hanging on or lying over electric light wires, lamps or fixtures, use a dry hand line.

2. Never handle any electric wire or apparatus with both hands at once when this can be avoided, and if it is necessary to do so be sure no current is present, or that one or both hands are protected by rubber gloves or other efficient insulation.

3. When handling line wires treat each and every wire as if it carried a dangerous current, and under no circumstances allow yourself to make a contact between two or more wires at the same time.

4. Never open a circuit which has been in use without giving notice to the superintendent or whoever is in charge, of your intention to do so, and at the same time request that the same line be opened at the main station and kept open until you have given notice that your work on that line is complete.

5. In the dynamo room never go near the belts or dynamos, nor touch any apparatus unless you are fully informed and instructed how to do so.

6. Tools used by linemen should be provided with insulating handles of hard rubber or other equally good insulator. It is the duty of each lineman to look after his own tools, and see that they are in good order, especially as to their insulation. "In construction work a space of at least twenty inches must be left between the holes for pins on the cross arms, so that a lineman may get to the top of the pole and work without danger."

7. Lamp trimmers and others engaged in the care of lamps must see that the switch putting the lamp in circuit is turned off before they handle the lamp in any way.

"Is Just a Little Wonder. Has Improved the Color of our STRAIGHT flour TWO SHADES, and INCREASED PATENT TEN PER CENT."

THE MACHINE REFERRED TO IS

THE NEW ERA SCALPER

Does not scour the bran. Requires little power and occupies small space.



One machine handles 4 breaks in 100 bbl. mill or 1 break in 500 bbl. mill.

DETROIT FLOURING MILLS.

JOHN CLEE.

DETROIT, MICH., November 28, 1890.

SUPERLATIVE PURIFIER MFG. CO., Milwaukee, Wis.:

Gentlemen—The New Era Scalper we bought of your Agent, Mr. C. A. Smith, two months ago, is just a little wonder. It is doing its work to perfection, and the power required is comparatively nothing along side the Hexagon Scalpers that we threw out and replaced with your machine. It has improved the color of our straight flour more than two shades, and it has increased our patent 10 per cent. In fact, I cannot say too much in praise of its work, and I hope that it will meet with great success throughout the milling public.

Yours truly,

E. G. BEASELY, Head Miller.

FOR CIRCULARS, PRICES, ETC., ADDRESS

SUPERLATIVE PURIFIER MFG. CO.,
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GUARANTEED
TO DO
FIRST-CLASS
WORK, AND
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PRICES LOW.



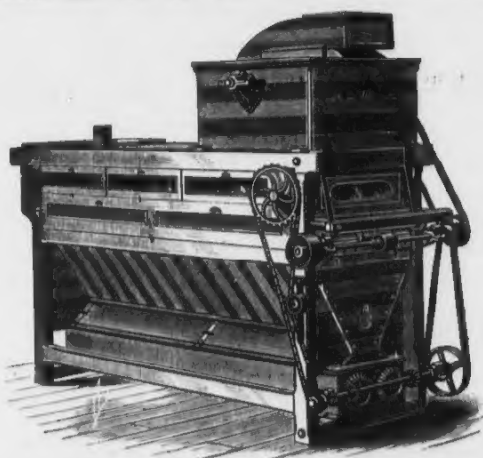
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IT INFRINGES ON
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MACHINE, AND
WE GUARANTEE
EVERY USER
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AGAINST SUITS.

Thousands in use in all parts of the country on Purifiers, Grain Cleaners and other dust producing machines.

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VORTEX DUST COLLECTOR CO.,
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The Superlative Purifier



A FIRST-CLASS MACHINE, AT LOW PRICES.

Guaranteed to do as good work as any Purifier on the market.

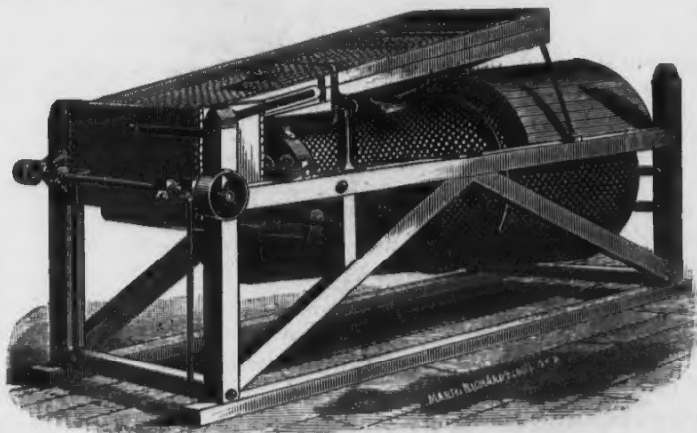
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Thousands in Use. * * * Trial Allowed.

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The Kurth Cockle Separator



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ALSO MANUFACTURED IN COMBINATION WITH
Richardson's Dustless Oat Separator Attachment.

We are prepared to furnish Steel Cylinders, if desired.

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COCKLE SEPARATOR MFG. CO.,
MILWAUKEE, WIS.

UNITED STATES MILLER
AND THE MILLING ENGINEER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

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SUBSCRIPTION PRICE—PER YEAR, IN ADVANCE.

To American subscribers, postage prepaid..... \$1.00

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Foreign subscriptions..... 1.00

All Drafts and Post-Office Money Orders must be made payable to E. Harrison Cawker.

Bills for advertising will be sent monthly, unless otherwise agreed upon.

For estimates for advertising, address the UNITED STATES MILLER AND THE MILLING ENGINEER.

[Entered at the Post Office at Milwaukee, Wis., as mail matter of the second-class.]

MILWAUKEE, DECEMBER, 1890.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER AND THE MILLING ENGINEER. You will thereby oblige not only this paper, but the advertisers.

MILWAUKEE AMUSEMENTS.

DAVIDSON OPERA HOUSE—Every evening, Saturday and Sunday Matinees.

BIJOU THEATER—Every evening, Wednesday, Saturday and Sunday matinees.

ACADEMY OF MUSIC—Every evening and usual matinees.

STANDARD THEATER—Every evening and usual matinees.

PEOPLES THEATER—Every evening and usual matinees.

GERMAN STADT THEATER—Regular performances Wednesday, Friday and Sunday evenings.

LAYTON ART GALLERY—Free Tuesdays, Thursdays and Saturdays. Admission 25 cents on Wednesdays and Fridays.

PUBLIC MUSEUM—Open daily. Exposition building.

Visitors to Milwaukee in either summer or winter cannot fail to find amusements suited to their taste.

THE Northwestern Miller promises an unusually good holiday number this year.

IT is more than probable that an international congress of engineers will be held during the Columbian Exposition in Chicago.

A RADICAL change has been made in the make-up of the *Chicago Journal of Commerce*. The size of the page has been reduced one-half and its appearance generally improved, typographically and otherwise.

A COMPANY is being organized in this city for the purpose of manufacturing the Shaw electric crane, for use in large machine shops. The organization not yet being perfected, we will delay further reference to it until next month.

"HOW is the milling business in Milwaukee just now?" we asked Charley Manegold on 'change. "Business is dull and money d—n tight," he replied. "That sums up the situation to a dot," said Faist. "You're right," coincided Stern.

THE regular quarterly eel stories are out again. This time it is a Georgia miller who took out 300 pounds of eels so as to let his wheels go around. If he had been a member of the Humane Society he probably would have taken out his wheels to let the eels go through.

J. J. McCANN, the talented and witty Tennessee miller is in Milwaukee, figuring on a new milling enterprise which will be of great importance to the South. He possesses in a marked degree that quality for which President Lincoln was noted, of illustrating a point by a pithy story, which the hearer is not likely to forget.

IF a mill owner expects his head miller to turn out a steady, even grade of flour according to a specific sample, the head miller should be allowed to purchase the wheat himself, or have samples of wheat submitted to him for approval before purchasing. He ought not to be expected to produce similar results from varying qualities of wheat.

MR. JOSEPH LA CROIX, the sole surviving male member of the La Croix family, so well known by reputation to millers, is now a resident of Milwaukee, and is connected with the publication of a French paper named *Le Courier Francais*. We take pleasure in stating that Mr. La Croix will be a regular contributor to THE UNITED STATES MILLER during the year 1891. Mr. La Croix is a

fluent speaker, a pleasant and clear writer, and is thoroughly acquainted with the technics of milling.

THE Publishers of the *Electrical, Mechanical and Milling News*, Toronto and Montreal, Canada, have sold their entire interest in the milling department of that journal to Mr. A. G. Mortimer, publisher of the *Canadian Lumberman*, by whom it will be continued as a separate publication, under the title of the *Canadian Miller and Grain Trade Review*, and will make its first appearance on the 15th of January next.

THERE are indications that mutual insurance companies are not as popular as formerly, and the first of January, 1891 will probably be the closing day for more than one well known company. Cheap insurance has been demanded at less rates than stock companies believed they could furnish it, and mutual companies have been organized by scores to take the trade at low rates. The competition has so increased that all have felt the results, and some of them will simply have to quit the business.

THE New York Board of Appraisers will decide whether bolting cloth is subject to a tariff, the same as other silks or not. It is hoped that they may so construe the law as to admit it duty free as heretofore. It is impossible to make bolting cloth in this country, and the excuse for taxing it cannot be that its importation will hurt American manufacturing industries. If however the tax is maintained it will prove highly profitable to those importers who "loaded up" with it before the law went into effect.

WITH the January number THE UNITED STATES MILLER will enter upon its sixteenth year of publication. It has been the aim of the publisher to make it valuable to its readers, and we believe we have succeeded. We have never striven to crowd our advertising department at the expense of judicious reading matter, and we have been therefore well rewarded with a large and constantly gaining regular subscription list. We desire to say that we shall make some attractive additions and improvements during the year 1891, and we trust that our readers will appreciate our efforts in their behalf.

WE acknowledge the receipt of a very tastefully put-up sack of flour from the Attica Mill of Attica, N. Y., which, having been prepared with usual care and formula, in such matters necessary, we practically tested in the form of bread and pastry, and can testify to its excellent quality in all essentials desirable. The Attica mill is owned and operated by Mr. C. J. Bork, who purchased the property last June, had it thoroughly overhauled and refitted, and at present it is one of the best equipped mills in western New York. The daily capacity is 400 barrels of flour, and, if what we received be a fair sample of the product, it should be taxed to its fullest capacity in supplying the demand.

THE flouring mills of Milwaukee are all in first-class order and several of them are models of perfection. Our millers, we believe are much more modest in making claims of superiority than many, in other locations. Some of them will quietly order thousands of dollars worth of machinery and place it in their mills and scarcely anyone outside of the mill but the mill-turnisher will know anything about it. Milwaukee flour stands high in both domestic and foreign markets, and our millers are certainly warranted in "blowing" about what they are doing if anyone is. Our head millers also are very close-mouthed, and for at least two years we have not heard one say that he could beat anything in the country on yield and quality. They study, think and observe, and when they are sure they can improve any department

they just go and do it. We have heard a miller having charge of a 50-barrel mill elsewhere, brag more in half an hour about what he and his mill could do than all the head millers in Milwaukee put together have done during the past ten years.

MR. FRANK BARRY the secretary of the Millers' National Association will soon go to New York to confer with various parties concerning the means to be taken to secure the adoption of an international bill of lading that will be acceptable to millers. This bill of lading matter appears to be a hard thing to fix, but it will be done as sure as fate. The milling interests of the country demand this reasonable recognition, and sooner or later they will get it. Mr. Barry is a skillful and persistent worker, and with the backing of the American milling industry, he will be able to get the matter fairly in motion at least. It is possible that Congress will be asked to take a hand in the game if other means fail. We do not know if it is true or not, but we have heard it said, that most millers are Democrats. If this is so they ought to wield considerable influence in Washington.

WE are gratified to note that U. S. Secretary Rusk of the Department of Agriculture has taken active measures to introduce the extensive use of corn (maize) as human food in the various countries of Europe. As a preliminary step he has appointed Col. C. J. Murphy, who has become known as "The Corn Champion", as special agent to Europe to introduce corn food products. He will be doing a great service to Europeans as well as Americans, for corn products are not only nutritious but palatable when properly served. Secretary Rusk thinks that this move will soon create a demand for 200,000,000 bushels or more per annum than heretofore, where it was almost entirely used for cattle food and distilling purposes.

HARMON F. NOTBOHM, formerly of Milwaukee, but now a resident of Spokane Falls, Wash., is visiting his old friends and relatives here. He speaks in glowing terms of the prosperity of not only Spokane Falls, but of the whole State of Washington. The water power there he reports as almost unlimited in capacity. The flouring mills are doing a thriving business exporting to Europe, Japan and China. The wheat is not as strong as Minnesota wheat by any means, but the yield is large and the product good. Seventy bushels to the acre is not an uncommon crop. Spokane Falls is in every respect a modern built city; it has over 30,000 inhabitants, electric light, street railways and scores of manufacturing institutions. Mr. Notbohm was formerly a member of the firm of Notbohm Bros. here, who were engaged in manufacturing the La Croix middlings purifier (1871-1876), and later of an air blast purifier, the only fault of which was that it needed a person of marked ability to run it properly. Although financially well fixed when he went west, Mr. Notbohm has more than doubled his possessions since he went to Spokane Falls. We have tried hard to induce him to stay in Milwaukee, but he thinks our climate does not agree with his health.

THE NEW RIVERSIDE CODE just out of press is now for sale by the Riverside Printing Co., of this city. Probably no Cable Code ever published has met with such a flattering reception from exporters, millers and flour buyers. The first edition of 1,000 copies was considered excessive, this however was soon exhausted, making a second, a third, and now a fourth edition (of 2,000 copies) necessary to meet the demand. In addition to many new sentences, there have been added extensive tables of invoice and freight compilations, which will enable an accountant to make out his foreign invoices in one-fourth

the time required by the regular method, or in case he prefers the regular method, he can prove his work quickly, and by so doing reduce the chances of mistakes to a minimum—the receiver of invoices and freight-lists can prove their correctness quickly, without going through the usual tedious methods. No such tables have ever before been published. Over six months steady labor by an expert accountant was required to compile these tables, and they, alone, are worth many times the price of the work. This edition is considered a complete code for the flour export trade, and the publishers have had it electrotyped in order to meet the wants of the trade to any extent that may be required.

THE Executive Committee of the Millers' National Association held its quarterly session in Chicago on December 16th. The meeting was fully attended, and among the matters acted upon was a resolution recommending that the members of the association shall agree, after Feb. 1st, that all sales of flour shall be for shipment within 15 days from date of purchase, unless otherwise specified at the time of the sale, and that a charge of 5c. per barrel for each 15 days, or fraction thereof, be made for delays beyond that time, until order for shipment shall be given. The secretary will present the same to the members, requesting that they signify whether they will sign such agreement, provided two-thirds of the members of the association acquiesce.

At the December meeting of the National Association two years ago, it will be remembered that action was taken in relation to an extra charge for packing in small bags, (fractions of a barrel), which has resulted in much good, and has been lived up to by the majority of millers. If the pernicious habit of selling flour, to be ordered shipped at an indefinite time, can be remedied in a similar manner, it will be a good thing for millers in general, and we do not believe that they will be reluctant to establish such a rule, which, if lived up to, will obviate a thousand and one petty disagreements resulting in lawsuits.

The matter of establishing an Exporters' Association, under the control of the National Association, was discussed thoroughly, and a plan in detail will be submitted for action, on January 15th. It is proposed in this organization to arrange for a complete tracing of all export shipments, from the time the initial railroad gives its receipt, until the flour is delivered to the consignee, the miller to pay a fraction of a cent per barrel fee for such service. The Association will have its agents and representatives at all points of trans-shipment, who will be notified of shipments coming their way, and who will report their arrival, transfer and forwarding, as soon as it is accomplished, to a central bureau, which will, in case of delay, energetically stir up the road which is responsible for it, and thus follow all movements of such shipments until final delivery. This plan will be submitted to the members of the National Association at an early date, and they will be asked to sign a small guarantee fund for starting the movement. This association will, of course, be limited to exporters, and can be easily maintained by them at a very small expense. It is hoped that the plan may prove practicable.

The secretary reported that an effort had been made to have the recent ruling of the treasury department, placing a duty upon bolting cloths, reversed, and friends of the National Association in congress give encouragement to hope that this unfortunate ruling would be reversed at an early date. In case it is not, the National Association will endeavor to have a bill passed by congress, to rectify the matter.

The report of the secretary showed that the association was in a very prosperous condition, and continuing to grow in membership.

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MAKING CONTRACTS BY CORRESPONDENCE.

THAT which is known in law as a contract, is, in practical effect, the foundation of all business transactions. A large proportion of business contracts are entered into as a result of negotiations conducted by correspondence, and there are many special principles of law which govern the making of contracts in this manner. The essential elements of a contract are consideration and agreement. Without a sufficient and valid consideration a contract cannot be enforced, and without the mutual agreement of the parties no contract can be created. Each of the parties concerned in a contract must agree to all the items of the contract which any of the others agree to, and if there is a single item to which one of the parties does not agree, there is no contract. This agreement must be either expressed or implied, and consent by implication must be so clear and unmistakable as to leave no ground for question as to the intent of the party against whom the consent by implication is urged. The inception of a contract made by mail is in the posting of a letter containing a proposition. A proposition made in this way is absolutely binding upon the proposer, if it is accepted before it is recalled. It may, however, be recalled or countermanded up to the time it is accepted. If it is desired to withdraw a proposition made by mail the withdrawal must be brought into the actual possession of the party to whom the proposition is made before it is accepted. To illustrate:—Let us suppose that a merchant in New York desires to submit to a merchant in Chicago a proposition for the sale of goods. He deposits in the mail a letter containing his proposition and by the next mail forwards a letter withdrawing or modifying the offer made in his first. If after the receipt of the proposition and before the receipt of its withdrawal or modification, the merchant in Chicago deposits in the post office an acceptance of the proposition, the contract is complete and the withdrawal is of no avail. If the letter of acceptance had been signed and sealed, but at the time of receiving the withdrawal should still be in the possession of the Chicago merchant, the withdrawal would be operative and the contract would not be consummated by the acceptance. The theory of the law is, that in the one case, the acceptance is still within the control of the acceptor, while in the other it has passed beyond his control. It is undoubtedly a fact in practical experience that if the acceptance were still in the possession of the post office at Chicago it would be subject to recall, but the law fixes upon the time at which the letter is actually placed in the possession of the post office as the time at which the rights of the parties are determined. In order to constitute a contract the acceptance must be an absolute and unconditional acquiescence in all the terms of the proposition. If the acceptance is coupled with conditions they must in turn be unconditionally accepted, and so on until at last there is an absolute acceptance by each party of all the propositions of the other. This acceptance need not always be expressed in words but may sometimes be implied from the acts of the acceptor. If after the submission of a proposition, the one to whom the proposition is submitted proceeds as if it had been accepted, that will amount to an acceptance of the proposition provided the acts were such as would be entirely inconsistent with a denial of acceptance. But the acts relied upon to show an implied assent to a written proposition, and so constitute a contract by implication, must be such acts as are absolutely inconsistent with any other theory than that of the acceptance of the proposition. A person wrote to another that under specified conditions he would accept the agency of certain goods concerning which negotia-

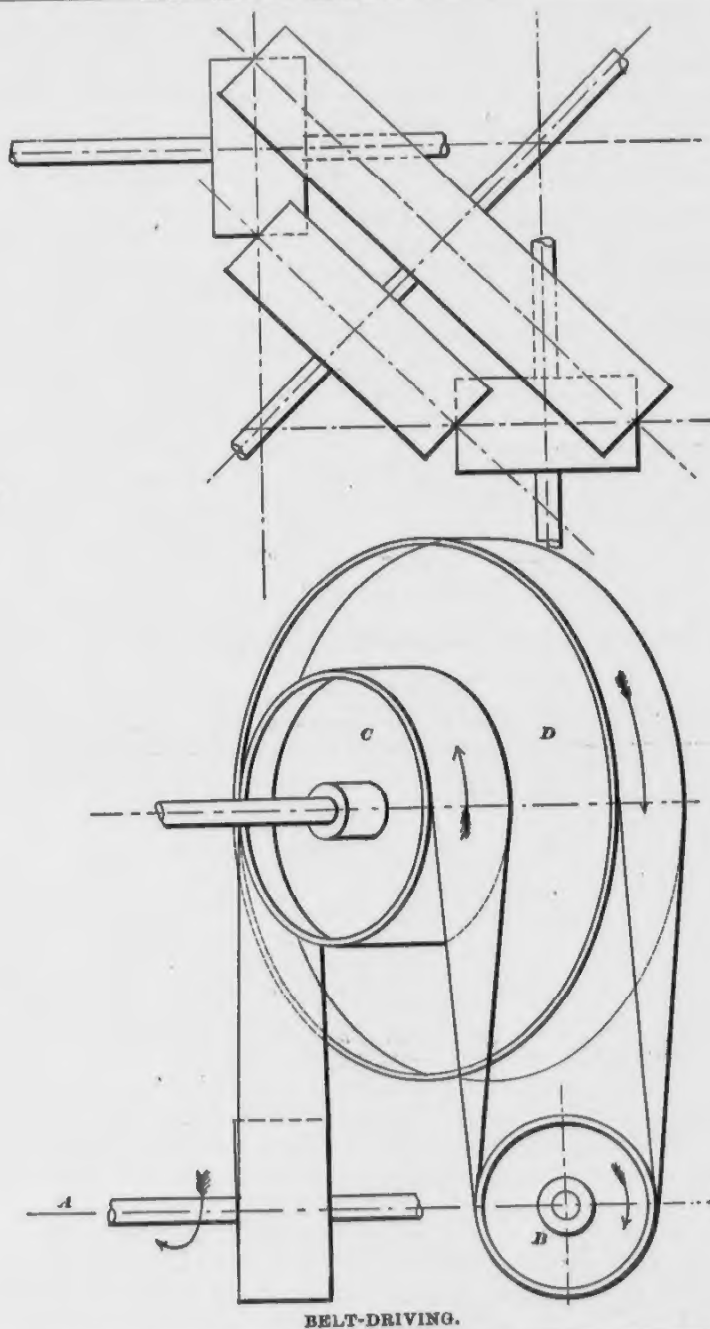
tions were pending, and requested that a contract be made for five years and directed that "under these conditions" a certain quantity of the goods might be shipped to him. On the same day this was written the other party wrote a letter containing additional propositions. These additional propositions were considered by the first party and negotiations were continued for sometime and were finally dropped. Afterward the purchaser endeavored to assert a contract or agency for five years, because the goods were shipped after the receipt of his letter outlined above. But the fact that negotiations were continued after the shipment of the goods showed that the parties had not arrived at a final agreement, and that no contract had actually been entered into. Where the terms of a contract are negotiated by correspondence, a condition of limitation which is once proposed and accepted need not be thereafter repeated or referred to in order to preserve its force, if it was definitely agreed upon. An offer made by letter may be accepted within and is binding

If this demand is not complied with, he may then prove their contents by letter-press copies or other memoranda made at the time, using them for the purpose of refreshing the memory of the witness who gives the testimony. The letter-press copying book of a business man may be used as direct evidence against him, but it cannot be as evidence in his favor except as outlined above.

These few suggestions regarding the formation of contracts by correspondence may contain much that is familiar to many business men, but if the cases which are litigated in the courts may be taken as an indicator, they lead to the conclusion that many men constantly engaged in making contracts are not entirely familiar with the practical application of the fundamental principles of contract law.

ANOTHER QUARTER-TURN BELT SUBSTITUTE.

IN our November number we published an article concerning quarter-turn belts, taken from the *American Machinist*



BELT-DRIVING.

for a reasonable time after its receipt by the one to whom it is made. What is a reasonable time depends entirely upon the circumstances. An offer made on an active market could not be held for consideration as long as an offer made on a commodity of fixed value. As a general rule the acceptance of an offer before the intervention of any circumstances which affect its value is within a reasonable time, though this is a matter governed almost entirely by the established usages of trade. What would be a reasonable time in one case would not be a reasonable time in many other cases; an acceptance within a week might be sufficient in some cases, while a delay of a day might be fatal in others. In this, as in most commercial matters, the law is largely determined by the evidence of good faith. Where a contract has been made by mail, it may be proved by the correspondence between the parties. The one desiring to prove the contract may introduce the letters of the other party in evidence, and serve upon him a demand that his own be produced.

of New York. A correspondent recently wrote that paper as follows:

"Seeing articles in the paper from time to time on belting devices to do away with the quarter-turn belt and the mule pulley stand, also the bevel gearing, which is more or less objectionable, I send you the device shown, which I think is way ahead of what has appeared so far. An explanation is not required, it is so simple. I might say however, that pulley A or B can be driver, and it is apparent that they need not be in the same plane. Pulleys C or D, either one or both, can be loose. The wear on the belts is much reduced."

We also present the cut herewith showing the device referred to.

THE USEFULNESS OF MACHINERY AGENTS

Some mill-owners have a great dislike for machinery agents, and will not permit them to enter their mills for fear they will put extravagant notions into the heads of their millers. This is a weakness which it seems to us could only be born of ignorance or lack of control of

ones own business and employees. A case of this kind which was extremely ludicrous, recently came to our notice. It was one of those cases where the proprietor was totally lacking in practical knowledge, and had to depend entirely upon the ability of his employees to run the mill successfully. (He wasn't even a good buyer and seller.) Whenever a machinery man came to the mill he was seized with a "holy terror" lest he should gain an audience with his head miller and convince him that the mill ought to be remodeled, or at least to have new machinery. The roguish agent took special pains to send every fellow missionary whom he met for months afterwards to this mill proprietor, with the assurance that he was about to make changes and would need his machines. At last accounts the mill proprietor was on the point of going insane.

This particular case of fear of machinery agents may be partially extenuated, but there is really a good deal of prejudice against the "boys on the road," for which there can be no reasonable excuse. Many sensible millers have to thank the agents for practical information that has been of vast importance to them, and there is always more to be gained than lost by according to them a warm reception.—*The Modern Miller* (November number).

ADVICE TO BOILER OWNERS.

In a paper read before the Manchester (England) Association of Engineers by Mr M. Longridge, member Ins. C. E., etc., the following advice to boiler owners is given:

1. Get your boilers designed for the work they have to do, and not make them 7 feet 6 inches by 30 feet, or 8 feet by 28 feet, as the case may be, because it is the fashion to have boilers of these particular dimensions.
2. Do not stick to 6-foot grates if a shorter length is required to burn the coal at the rate of from sixteen pounds to twenty-one pounds per hour.
3. Reduce your draught as much as the nature of the coal and the smoke inspector will permit. Try and reduce it till the fire is hot enough to melt a piece of steel boiler plate.
4. Buy your coal and keep it dry. Weigh the ashes which come out of the furnaces, as well as the coal that goes into them.
5. Be most careful to stop up air leaks in the brick work, and between the brick-work and the boiler.

A PARIS correspondent of the *Confectioner's Journal* says: "There has been a great scandal of late in the millers' trade in Paris. It appears that a certain unscrupulous firm supplied, or attempted to supply, to a number of institutions and private persons a quantity of flour under contract, which was a very long way indeed below the quality specified for in the original agreements. In the end several lawsuits were instituted to recover damages against the millers' firm in question. The evidence which was given was of much interest, not only to the trade, but to the general public, and it has been sufficient to damage the future of the defendant firm, so far as trade in Paris is concerned. It seems that the firm was in the habit of buying inferior flour at the London docks, which had been sold for the recovery of freightage dues. This practice had been carried on for a long time past, and although frequent complaints had been received as to the quality of the flour, it was not till a couple of weeks ago that the lawsuits were brought, and thus established the malpractice of the Paris flour sellers. There are several other French firms I could mention who would do well to profit by the lesson which has just been taught by the Paris law court. In the main our millers have earned a reputation for honesty and reliability which does them infinite credit, and it is well that a sharp practice such as that which was investigated by the Paris tribunal, should be snuffed out at the earliest opportunity."

CORRESPONDENCE.

[The following letters are all from our own special correspondents, and reflect their views and the views of the trade in the location from which they write.]

MILWAUKEE REVIEW.

IN two weeks everybody interested in the manufacture or sale of Flour or the handling and sale of grain, will be taking stock again and figuring up their gains or losses.

The near approach of the closing year gives the Market something of a dull character. More ready money and less stock is the universal requirement at this season of the year.

Taxes are due Jan. 1st. Many notes and other financial obligations full due on Jan. 1st, and besides large stocks of goods, long accounts and brisk trade in time of stocktaking makes it difficult to get at the true state of business. Consequently business of almost all kinds is allowed to run low at this time. Trade therefore is slack everywhere and such is at present the disposition of dealers and the character of the Milwaukee Wheat and Flour Market.

After the financial disturbance of November which drove wheat down about 10 cents per bushel, the strength of other grain and the statistical position has kept Wheat pretty steady. The present price of Sample Wheat is 83 to 88 cents, with a fair demand for good milling samples. Flour production has fallen off and the better grades are hanging heavily on the hands of millers, while Bakers and Export grades pass reasonably fair on export account. Some shading would be made from the following prices to effect sales of Patents and high grade flour. Following is the range of prices:

No. 2 Hard Spring Wheat Pat. in bbls	\$4 75 to 5 00
Soft " " " " " "	4 50 to 4 75
Export " " " " " "	4 25 to 4 50
Clears, Hard Wheat	3 75 to 4 00
Soft " " " " " "	3 40 to 3 60
Straights, Choice Bakers	4 25 to 4 50
Export Bakers	3 50 to 3 75
Low Grades	3 00 to 3 50
Winter Straights in bbls	4 50 to 4 75
Rye Flour in bbls	3 75 to 4 00
" " " " " " " "	3 00 to 3 50

Millstuffs are in good demand and rather scarce at following prices:

Sacked Bran, Car Lots	\$15 75 to 16 00
Fine Middlings, Car Lots	16 25 to 16 50

Rye is in fair demand at 68 to 69 cents for No. 1. Receipts are not above the demand.

Oats and Corn are cheaper with liberal supply, and no orders of consequence.

European markets are reported higher all round. The increase on passage last week was about a million and a half of Wheat and Flour as wheat.

The Azof ports are closed by frost.

The acreage of Winter Wheat in this country is larger than usual and at present has a fine outlook.

Readers, we are promised that seed time and harvest shall continue. With confidence reestablished and a little more energy on our part our bread will be secure.

The United States Miller wishes you all a Merry Christmas!

DONALDSON.

OUR BALTIMORE LETTER.

"Oriole" Goes for Crooked Dealers—Some Sound Business Advice to Millers—Markets. Stocks in Store—Predictions for the Future—Local and Personal Notes, etc.

THE late demoralization in breadstuffs has proved to our mind conclusively the great depravity of human nature. Never before have we seen it exemplified so brazenly as on the recent decline. We refer, of course, to the conduct of those in the flour trade, who, on such occasions, resort to all sorts of tactics, schemes, technicalities and subterfuges to worm out of purchases that show a loss, instead of living up to their contracts like men, and who, with the cheekiest nonchalance imaginable, are content to saddle their mistakes and burdens on innocent and defenseless shoulders.

We regret to say, too, that such practices are not confined to that class from

which we can expect nothing better, but are also indulged in by some who occupy high seats in both social and religious circles, and who pose in the community as citizens of the straight-laced and pink-of-perfection type. But we care not who he be, if such are his methods, whether high or low, rich or poor, saint or sinner, he is guilty of robbing his brother, notwithstanding, and should be dealt with accordingly. We don't believe in calling black white and in glossing over rascality of any description, so if we appear particularly severe and vindictive in our treatment of the hypocrites that infest the trade, and that bring disgrace and ridicule upon the church, and by their examples send our young men straight to hell, the reason will be understood. If a man wants to pray, let him pray; if he wants to worship, let him worship; if he wants to be a christian, let him be a christian; but don't let him pose as a saint on Sunday, a swindler on Monday, and expect us to have any faith in him.

A thief is a thief, the world over, regardless of wealth, position or profession, and we are opposed to calling him by any other name; but he that practices the art openly and above board has our respect much more, by far, than the man who does it on the sly and under the garb of a christian.

We have no use for a hypocrite, and yet the world is full of them. We honestly believe that many men join church ostensibly for the money there is in it—for the position and credit it gives them, and for the means it affords to divert suspicion. This is not a charitable assertion, but while the appearances are on our side, we cannot think differently. We are speaking, of course, in a broad sense, and have no reference to Baltimore merchants especially, although they too, in instances, are found wanting.

Look around in your own communities and see if what we say is not correct.

It applies not only to those in the flour, grain and milling industries, but also to those in every other branch of trade.

While the Pharisees resort to all kinds of unscrupulous methods to make money, there is none more popular with them, probably, than that of adulteration. We have known of those high in the synagogues, and not Hebrews, either, who have manipulated rotten buckwheat and sold it for "pure mustard," mixed cornmeal with flour, and branded it "best patent," parched beans and put them on the market as "roasted coffee," and so on. Doubtless such is the case throughout the entire list and including every article of merchandise.

No occupation, in fact, is apparently exempt from these wolves in sheep's clothing; but we claim that we have a right to expect something different from the "saints" and that they should either practice what they preach, or else take in their signs.

It is hard, indeed, nowadays, to distinguish the line which separates the good from the bad, so loose and callous in their dealings have the former become, and, alas! and for shame that such is the fact.

Standards of morality, integrity and honor have become so low in these latter days that at present the one ambition of many seems to be to get rich, honestly if they can, but to get rich, and the consequence is that, through the fraud, trickery and deception abroad in the land, men's consciences, irrespective of all other influences, have become hardened, distorted and unimpressible. The love of money is certainly the root of all evil.

And while this is so in every department of life, we wish in conclusion to show more particularly how eminently true it is in our own special line of business.

These are the times when dealers examine purchases with microscopes, and where defects are found, even of a minor character, the shipments are rejected and

thrown back on the miller without recourse.

These identical goods, however, generally pass muster on advancing markets, and fail to do so only when they happen to show a loss.

Now, what chance has a miller when he is thus taken advantage of? He is between the devil and the deep sea, and consequently in for it whichever way he turns.

Mind you, we do not contend that all rejections on declining markets are illegitimate; far from it. But we do claim that a large percentage of arrivals on such occasions are turned down, when there is no other apparent cause for it. Our object in writing this letter is to expose these sharks that play the millers for suckers, and that have no idea whatever of paying for goods at the time of purchase, unless they show a profit on arrival. We also want it understood that there are many in the business who rely on rejections and the rebates that follow, to feed and fatten—being unfit to obtain a livelihood in any other way.

It is always "heads I win and tails you lose," with them.

Such fellows haven't an ounce of honor, principle or self-respect; no such words are found in their vocabulary. But many of them "belong to church," all the same. If the "sanctified" treat us in this fashion, what more, then, can we expect from the unwashed?

We are onto these "apostles" of righteousness, and if they think they can hoodwink or bulldoze us in the least, they are mightily mistaken.

If they have no better examples to set to the worldly, they should take off their masks at once and do their dirty work in broad day-light, and not under the cover of that which no longer deceives their victims.

Being in touch with agents that travel everywhere, some sickening experiences have of late been brought to our notice, which bear directly on the subject at issue.

One of them was that of a "christian brother," with a face on him as long as your arm, who wanted to reject a lot of flour, because, he said, it was "too blue," when, in reality, it was pronounced by experts to be all of 25 cents better than the sample sold by. The market was down, however, and that settled it as far as he was concerned.

Another case was where certain parties refused to pay their 30 days' drafts at maturity, but actually let them go back with this explanation: "We are a little hard up at present, so you must either give us 30 days more time, or else take back your flour." Those fellows, too, who bought at the top and who now refuse to give shipping directions on the same until prices have reached to where they got in, are also on deck, and in the meantime are using something cheaper from another source.

We could go on at this rate for time and infinity, but as our readers have them all, doubtless, on the list already, and as space is precious, we will forbear and proceed no further.

What we need, above everything, is a higher standard of commercial ethics—a better code of business principles, and, in a word, consciences which are more sensitive and susceptible to wrong-doing.

The safest and most satisfactory rule to follow, after all, is that of "doing unto others as you would have them do unto you." We fail to see, therefore, in any sense, why the miller should always hold the bag and the dealer the swag, but such seems to be the order of things invariably, notwithstanding.

If a merchant uses bad judgment in buying, he should take his medicine like a man, and not play the baby-act at somebody else's expense. It is true that we occasionally hear of invoices being deficient in quality on advancing markets, but can it be wondered at while millers

are so grossly imposed upon, when the conditions are reversed?

However, two wrongs don't make a right, and we advocate no such way of getting even.

It may be folly to hope for material improvement this side of millenium, but if mills will do their duty and stop this drawing at 30 days and leaving a margin, much of the trouble could be obviated.

Dealers, as a rule, appreciate nothing that mills do for them; but, on the contrary, take advantage of it right along, as we have already shown; and the only thing to be done now is to withdraw all favors, privileges and accommodations, hold buyers with a tight rein, and require them to pay cash for whatever they want. We would also advocate the black-listing of all those who make a habit of rejecting on declining markets, and, for mutual protection, the reporting of the same to every millers' convention in the land.

Under such restrictions, and threatened with such exposures, the trade might possibly come to its senses, correct the abuses complained of, and conduct business on a square basis, but hardly otherwise.

The past month has been unparalleled for dullness and depression in the Baltimore flour market.

During that period city mills have reduced prices 20 cts., and local jobbers 25 cts. while agents are now offering stock to arrive at fully 50 cts., in instances, below the figures we last quoted.

The demoralization has been so complete that at one time your pick of spring and winter patents could have been had at \$5, but since the up-turn in wheat some of the best are a little firmer than that.

Dealers here are pretty well loaded with high-priced flour, and consequently are hard to convince that now is the time to take on more and thus make a good average.

As usual, they were big bulls at the top, but can see no bottom to values now, that they have reached a bed-rock basis. The man who buys flour at present prices will never have cause to regret it.

Winter straights and clears range respectively as follows: \$4.60@4.75, and \$4.35@4.60. Fancy extras still command \$4.25, while the inferior grades range as low as \$3.50.

Spring bakers' are neglected and abundant at \$4.00@4.25

The stock of flour here Dec. 1st, exclusive of that held by city mills, was 73,477 barrels, against 61,673 barrels a month ago, and 78,155 barrels Dec. 1, 1889. Tight money, failures, depression in Wall street, and a general lack of confidence everywhere, has brought about the present unsettled condition of affairs; but there is a silver lining to the darkest cloud, and if we have patience we will find it true in this case, too, and in the end, that all will be well.

At this writing jobbers report a better movement from store, and a revival of business incident to the Christmas season; but beyond that we can expect no volume of traffic until after the holidays.

Unlike the balance of the trade, city mills have been very busy all the month, and report heavy sales both for export and home consumption.

Their output for November was 39,000 barrels, and insufficient for requirements, which compelled them to draw on reserves.

Receipts have been large, but represent through shipments principally. After the first of the year we look for a complete restoration of confidence, and for active and higher markets generally, if, indeed, it does not come before then, when least expected.

We quote the range of the flour market as follows:

Spring wheat, patent	\$4.90@5.15
Spring wheat, straight	4.50@ 4.75
Spring wheat, bakers'	4.00@ 4.25

Winter wheat, patent.....	\$4.90@5.15
Winter wheat, straight.....	4.60@ 4.75
Winter wheat, clear.....	4.35@ 4.60
Winter wheat, extra.....	3.50@ 4.25
Winter wheat, super.....	3.00@ 3.40
Rio brands, extra.....	5.00@ 5.10
City mills, super.....	3.15@ —
Rye flour.....	3.75@ 4.25

The wheat market here, in sympathy with outside influences, has fluctuated considerably during the past month; but notwithstanding that fact, the closing figures to-day show a gain of 3 cts. on cash and 1 ct. on January, over our last quotations, while the May option remains practically unchanged. The near-by wheat has gone into strong hands for the winter, and that accounts for its relative firmness and improvement.

We look for a less difference yet, however, between cash and the options.

Receipts have been small and clearances fair, while stocks show a gradual shrinkage.

Considerable has been exported this month, including a full cargo by Gill & Fisher, and we hear of more charters for future loading.

New York, eastern and local millers have also been drawing on our supplies quite largely.

Milling selections are scarce and badly wanted at full prices.

Speculation here is mostly bearish again, but there are a few, however, who confidently predict much higher values than we have yet seen on the crop. Some of these go so far as to say that the statistical position of the cereals warrants \$1.50 being the ruling price on the seaboard. We do not go to that extreme, but are satisfied that the berry will command something like \$1.25 in the eastern markets before another crop.

It is only a question of time before the shortage manifests itself, and when that period arrives, and the gravity of the situation is realized, values will mount about as rapidly as they declined.

After the people get over their scare and put their monies back into circulation, prices will advance of their own accord, and without any assistance.

Our best posted operators look for no more increases in the visible, but a weekly shrinkage, from this time on.

Some think that cash wheat will command a premium over every option before long.

Outside of spring wheat there is no movement of the cereal in any quarter, but a gradual reduction of supplies everywhere.

The situation is strong, and there is no rubbing it out.

And then, again, look how cheap wheat is in comparison with every other article of food, and also with corn, oats, rye and mill-feed.

If we had an abundant crop, it would be a different thing; but in the absence of such a contingency, the cereal should rule higher, relatively, than it does, and will, too, sooner or later.

Stock of wheat in Baltimore is 809,053 bushels.

CLOSING AND COMPARATIVE PRICES.

Wheat.	Closing	Same time
No. 2 Red—	to-day.	last year.
Spot.....	95 @ 96½	79½@79½
Steamer 2.....	@ —	74½@74½
Fultz.....	95 @101	73 @83
Longberry.....	98 @101	74 @84
December.....	96 @ 96½	79½@79½
January.....	97½@ 97½	68½@80½
May.....	103½@108½	86½@86½

The corn market here, as elsewhere, has been very erratic since our last report, and closes to-day with a gain of 1 ct. on cash, and 1½ cts. on year, and ½ ct. on May, in comparison with our figures a month ago. Receipts are increasing, clearances decreasing, and stocks about double what they were last month. There is a good home demand for corn, even at present high prices, but we fail to find urgency from any other source.

The heavy movement which we have long expected fails to materialize; but when the stuff does begin to come out in

earnest, as it must do some time or other, there is but one way for values to point, and that is downward.

In the absence of stocks there may be manipulation in Chicago and New York; if so, it will only be momentary, serving to bring out the actual stuff in sufficient quantities to carry prices down in the end. It is to be hoped that farmers are realizing on their corn at present prices.

Stock of corn in Baltimore is 186,369 bushels.

CLOSING AND COMPARATIVE PRICES.

Corn.	Closing	Same time
Mixed—	to-day.	last year.
Spot mixed.....	58½@ —	43½@ —
Steamer mixed.....	54½@ —	38 @38½
South white.....	55 @58½	34 @40
South yellow.....	51½@58½	33 @39
Year.....	@58	30½@40
January.....	57½@57½	38½@38½
May.....	57½@58	@ —

MILL FEED.—Arrivals run meagre, and market rules very firm, especially for light weight bran. We quote as follows: Western bran light 12@13 lbs, \$22.00@ \$22.50; do. medium, 14@16 lbs, \$20.00@ \$21.00; heavy over 16 lbs, \$19.00@19.50; and middling \$20.00@21.00, all on track. City Mills middlings \$21 per ton sacked and delivered.

ITEMS OF INTEREST TO THE TRADE.

The well known Silver Spring mill of Baltimore, owned and operated by J. Olney Norris, was destroyed by fire early on the morning of Nov. 23d. It is an open question still, whether Mr. Norris will rebuild or not.

C. R. Knickerbocker, mill furnisher, of Jackson, Mich., spent a few days here, the latter part of last month.

The Wm. M. Powell Grocery & Flour Co., of Baltimore, has been incorporated, with a capital stock of \$75,000.

Henry C. Corner, second vice-president of the C. A. Gambrill Manufacturing Co., was greatly benefited in health by the trip he took recently, for that purpose.

Alex. Mann, eastern representative of J. B. A. Kern & Son, of Milwaukee, was in Baltimore last week, looking for orders.

C. M. Smith, agent of the E. Sanderson Milling Co., of Milwaukee, did Baltimore and Washington for his firm this week.

Edward L. Roelkey, chief grain inspector of the Baltimore Corn & Flour Exchange, resigned his position last Tuesday, on account of ill-health.

Jas. H. Gambrill, the genial miller, of Frederick, Md., reports a scarcity of wheat in his section.

Horace Wade, of the Columbia Mill Co., Minneapolis, called on the Baltimore flour trade last week.

H. A. Deardorf, of the Isaac Harter Co., of Fostoria, O., and A. A. Keene, representing the Sidle-Fletcher-Holmes Co., of Minneapolis, were also among our recent visitors.

We wish THE UNITED STATES MILLER, its readers and all who are in any way connected with it, a merry Christmas, and a very happy and prosperous New Year.

ORIOLE.

Baltimore, Dec. 15, 1890.

OUR BUFFALO LETTER.

A Sensation on 'Change—The Lake Erie & Ohio Canal—Oregon Wheat—Tunnel Building—Elevators—Bakers—The Attica Mills—The Market—Stocks on Hand, etc

THE most scurrilous letter ever written by one business man against another appeared in the most prominent paper published in this city, November 26th, under the signature of "A Grain Merchant." In some manner unaccountable to the proprietors of that paper it passed the portals usually traversed by communications of its class and was found printed on the afternoon of that date. The excitement caused on 'change that day was something unprecedented in the history of the board. The next morning the feeling was riotous, and for the following week nothing but condemnation for the unwarranted attack

upon the Exchange was heard. The writer began his letter with a whine about the management of the board, its court of equity, rebates, commissions, bucket-shop quotations, and finally closing with the statement that "the exchange has drifted into a state of utter demoralization. Professional trickery has taken the place of straight forward business methods. Is it any wonder in an atmosphere like this they should have bred as choice and cheeky a lot of business crooks, both expelled and unexpelled as can be found in any aggregation of 500 business men the world over?"

Every man on 'change after reading this "confession of a fool," immediately placed the writer of it on the first floor of the Board of Trade building. They are the sentiments of an office on that floor, and but few members of the exchange have not been bored with the expressions found in the letter by "A Grain Merchant" doing business there.

The Exchange called a meeting and denounced the writer also passing resolutions requesting the trustees of the board to take such action as they deemed best to punish him, as the by-laws direct. A few days later a rumor was circulated that the writer was Mr. George B. Mathews, of the firm of Schoellkopf & Mathews the millers. The senior member was first to speak of it to his young partner and thought something should be done to cast the suspicion from the firm. This, Mr. Mathews did in *The Commercial*, in a strong manly article. The members who are thoroughly acquainted with the differences between Messrs. Wright & Son and the firm of millers highly enjoyed reading between the lines. The letter, which is signed by Mr. Mathews states that a more honorable body than the grain merchants of Buffalo cannot be found in the world. Further on he says:

"One naturally objects to being considered both a fool and a knave—even by strangers—and so it was somewhat surprising to find myself publicly accused of having written the false and cowardly attack signed "Grain Merchant," and to see the published interviews of such men as Meadows, Guthrie, Simons and others, even of my venerable and kindly partner, twisted into suspicious hints, apparently aimed, not at the party whom these gentlemen, in common with many others, actually suspect, but curiously enough at myself."

And then this sweet morsel: "As in other occupations you find the occasional "black sheep;" but the grain trader whose word is not better than his bond, sooner or later parts with his legitimate business, and drifts into other fields or finds his level in bucket-shops and kindred enterprises."

The Commercial could not give up the name of the writer under the rules observed toward all correspondents, but calls upon the "Grain Merchant" to come from cover. This he will not do, but there is no doubt the skunk will be smoked out, ere long. At all events he has received a terrible scorching every day of his life since the letter was written, and in the opinion of some of the members of the Exchange he has suffered enough.

The Trustees of the Exchange met yesterday and appointed Messrs. Rodebough, Hodgson and Hughes, a committee to confer with attorney John Milburn as to the best course to pursue in an attempt to unearth the writer of this letter.

The state commission on the ship canal from Lake Erie to the Ohio River will report in favor of an appropriation by the state for building said canal. The survey provides for a canal 102 miles long. Manufacturers of Pittsburg and business interests to be benefitted by the canal on its line are giving the scheme all the encouragement in their power.

The Canadian Pacific Railroad has acquired considerable property on both sides of the river at Niagara Falls and surveyors are now at work there prepar-

ing for a bridge. A Buffalo company is also interesting itself in property along the river front, and it is suspected that the road will take that route to the city.

A Canadian Commission sent to investigate our canal system has completed its labors and returned home. The Canadian government proposes to extend the canals in the Trent Valley from Lake Ontario to Georgian Bay and the visit was in that connection.

There is quite a large amount of Oregon white wheat in store here. This wheat is principally used in the manufacture of cereal products. At present it is quoted at 95 cents per bushel, but sold at 91 cents recently to go to New York. Millers here will not touch it at 85 cents, having had sufficient experience with it five years ago when first introduced.

The "old red mill" at Sinclairville, has been purchased by A. A. Snyder and will be improved.

Burglars broke into the mill of E. S. Hoag, at Medina, N. Y., a few weeks ago. The haul was only \$10 but they were lucky in getting that these dull time.

Tunnels are all the go now. Several new schemes in that line are talked of in different places. Buffalo will wake up some of these days. The Niagara tunnel builders are meeting with considerable trouble from water. Heavy pumps are being put in to relieve the working.

The price paid for the damaged grain in the ruins of the C. J. Wells elevator, \$17,000, was just about its value, and Messrs. Kennedy & Co. will have their labor for their pains. Banker Henry who furnished the capital has found it necessary to keep a close watch on the receipts in order to come out even. What a lucky thing it is that this fire did not happen a few weeks earlier. The smell from the last cargo of rotten wheat had not left the nostrils of the people living within two miles of the stuff when this fire occurred. Cold weather saved Kennedy & Co.

The executors of the C. J. Wells estate have not yet decided whether to rebuild or not. The site is one of the best on the line of the river not taken by railroads, and the Lackawanna is figuring for it. It is only a matter of a season or two when this road will see the necessity of having an elevator for its grain trade and also require more dock front for its great terminal business.

As a rule bakers are a queer lot, but the Vienna Bakery of this city has had more trouble with its men than commonly falls to the lot of employers. The complaints from union men at that establishment are so frequent that it is becoming a matter of doubt in the minds of those disposed to side with the managers of this bakery whether the men are not justified in kicking over the traces. Too much interference with unions is not a wise policy. Surely these men have as much right to combine as the cracker and bread men have, and the managers of the Vienna Bakery are all firm believers in trusts. The sympathy is leaning toward the bakers and the best move for Falke, Harvey & Co., is to let the men alone.

Meeting a friend from Attica a few days ago, I inquired how the Attica mills were running. The answer was "splendid; never in better hands than the present proprietor, and to tell you the truth he has entirely changed my opinion regarding his ability to handle that unfortunate piece of property. I find he has the pluck and the brains to know that the success of the mill depends upon keeping up his grades of flour and advertising liberally. Taffy without the cash will never break the new mill; it had much to do with past failures."

This report rather astonished me, as it was generally understood here that H. H. Eldred was managing the mill, and I knew the smallest kind of a mascot could not long endure the presence of so large a Jonah. I expressed myself to that effect. "Oh, Eldred has never managed the mill for Bork," answered the man from Attica,

"and the little fussing he had about the electric light plant was of short duration. He has left Attica for good, thank heaven."

I have heard since from most reliable authority that Eldred is not employed in any capacity by the mill, neither has he anything to do or say about the electric light plant. This is good news and I am glad to be able to correct the item in my last letter.

This has been one of the dullest times known on 'change in the wheat trade. When prices got down to where the stuff looked dirt cheap, either buyers would hold off for a still further slump or sellers were taken out of the market. For a whole week, this month not a bushel of wheat was offered, and then finally a seller of car-loads offered. He asked a premium of 6 cents over what was considered a fair market price, and got it too.

One great drawback to the trade here was the scarcity of money; there was positively none to be had at any price and dealers look for no improvement until after the holidays.

There is no doubt but that wheat is good property at present prices, still millers will not take hold, preferring to live on the hand to mouth principle. The stock of Duluth wheat here is 1,639,416 bushels of all grades against 3,130,387 for closing date last year, and the ports are now all closed. Mr. George Urban, Jr., is the only miller having a stock sufficiently large to carry him through until the opening of navigation. How the other millers can compete with him is a conundrum.

I wish to claim a prediction in the October number of the UNITED STATES MILLER that hard wheat would sell at \$1.00 before the close of navigation.

Just how much wheat is in store here remains as much a mystery as ever. The amount "checked out" for shipment by rail is an unknown quantity, but from all that can be learned it will go forward either to New York or other milling centers. Urgent orders have been received by freight agents to rush it to the former place, but the roads are from three to five hundred thousand bushels behind in their shipments, and with the accumulation of other freight, difficulties of transportation by rail during the winter months, etc., there is no telling when the quantity to go will get to its destination. The receipts of flour averaged 100,000 bbls. per day for weeks before the closing of navigation, and it takes 8 cars to carry away 1,000 bbls.; what chance remains for the grain shipper, within the next month at least. There will be considerable more howling from the east before the roads catch up.

The only elevator not having its capacity well tested is the New Exchange, and this is owing to the fact that dredging is not finished to a sufficient depth to allow large vessels to unload there.

It is settled as far as another canal forwarding association is concerned that none will be formed next year. At least the crowd of kickers say so, and they comprise the bulk of the old combination. This will please the receivers who have used the boatmen as cats to pick the chestnuts out of the fire for years. The railroads played a sharp trick on the canals by taking the grain and paying storage on it until they could move it. I am afraid they will yet succeed in making the grass grow in the bed of the canal as was prophesied by the late John Gausson.

The receipts of flour at this port for the season foot up 6,300,000 bbls. against 5,000,000 bbls. last year. Of grain the amount received was 89,560,000 against 88,500,000 last year.

Shipments by canal were 38,477,000 against 41,942,000 last year.

Shipments by rail up to December 12th, 37,200,000 against 38,200,000 last year.

The receipts of Duluth wheat for the season were 9,373,000 against 10,275,000 last year.

Rates by canal on wheat averaged 3.8 cents against 4.3 cents last year. The lake rate on wheat was 1.9 cents against 2.3 last year.

Morford of Chicago, was here, and to hear him talk is enough to make a "shorts" flesh creep. There is no wheat in the country, he says, and he has been in all the milling centers for the purpose of ascertaining the fact. "New York is crying for wheat; Rochester has none; Buffalo will be short over 1,500,000 bushels if she depends on Duluth wheat, and I will be d—, if you can get much from Minneapolis. I see you have no cars to ship flour with. I got a letter to-day from my old friend, one of the biggest millers in Minneapolis, and he says he has a bid by cable of 6d advance for 4,000 cars of flour. Not having this amount of capacity until months to come, he went over to Washburn, Crosby & Co., and offered to take all they could make until April, but could not secure enough to make acceptance an object. I find it is so all over the country, and if we can't get up the price of wheat now we had better give it up. I can promise you that as long as I live I will never buy another thing if \$1.20 is not reached before May."

Mr. Abel Richmond is building a new mill at Clifton Springs. He was formerly of Richmond & Smith, millers in Canandaigua, N. Y.

Bert Chaffee will soon commence an addition to his mill at Springville. He is a hustler on a par with some of his best trotters.

The New York Central Railroad which has been playing a game of bluff with the Rome, Watertown & Ogdensburg road for some time past has absorbed it. Not that the R., W. & O. was bluffed; it got its price, and that was all the engineers of the deal wanted. This little road could have made it warm for the great Central in competing for New England business, by the building of a small branch. Buffalo is sorry.

The retirement of Vice President Felton from the directory of the Erie road is considered a long wished for move, and will benefit the road. That railroad, as a rule is about the worst over-managed on the face of the globe, at least at this end of the route.

The Lehigh authorities have leased the contract for extending the canal at the Tift farm docks, 1,800 feet. BUFFALO, N. Y., Dec. 15, 1890.

OUR ST. LOUIS LETTER.

St. Louis Millers Complain of Dull Times—Present Quotations—Receipt and Shipments—Stocks in Store—Kansas Demands Cheap Transportation—Farmers' Alliance Schemes—Illinois Millers' Ass'n—Insurance Matters—Personal Notes—The Month's Production, etc.

THE flour market here has been very quiet during the past month, and all the millers are complaining of the dull season. In fact, with but few exceptions, the present period is the dullest that St. Louis has experienced for many years. There is very little demand, and that is only from Southern points, while a small local trade is barely kept up. Orders come in only when necessity requires, and buyers and sellers are as far apart as ever. The only reason for this state is the financial condition in New York supplemented by the closing of the year. No change is expected until after Jan. 1st. Present quotations are: XXX, \$2.90@3.00; family, \$3.10@3.25; choice, \$3.40@3.65; fancy, \$4.00@4.15; extra fancy, \$4.35@4.45; patent, \$4.65@4.80. The only advance over last week's prices was in extra fancy, which was held then at \$4.30@4.40. On the other hand both choice, fancy and patent fell off somewhat this week. Last week's market being choice, \$3.50@3.70; fancy, \$4.10@4.20, and patent, \$4.70@4.85.

For the month of December, the receipts and shipments were:

	RECEIPTS.	SHIPMENTS.
First week.....	18,328 bbls.	58,723 bbls.
Second week.....	19,145 "	52,214 "
Total ..	37,471 bbls.	110,937 bbls.

Wheat, too, has fallen off of late, both in receipts and shipments, though the former improved somewhat over last week's figures, 99,324 bu. as against 85,001 bu. last week. Shipments fell off 60 per cent., and the market reports show only 74,618 bu. as against 208,151 bu. of the week previous. Stocks in elevator are 2,092,668 bu., 88,000 less than that on Dec. 6th. There were no withdrawals of wheat from elevators for export via river, and only 148,116 bus for rail transportation, while home consumption was satisfied with 76,069 bus. Wheat, in price, was higher and stronger, and held at such figures as to be beyond reach, the millers not obtaining all they needed.

Quotations on Nos. 2 and 3 red for the week are:

	NO. 2 RED.	NO. 3 RED.
Monday.....	92½@93	90 this side.
Tuesday.....	92½@93	90½ east side.
Wednesday.....	93@93½	92 "
Thursday.....	93½	90 this side.
Friday.....	94@95	93 east side.
Saturday.....	95½	90@93½

Speaking of wheat, I have just seen Miller Jordan, formerly with Reichert, of Freeburg, Ill. He has just returned from a trip through Northern Missouri and Iowa, and relative to the wheat crop says that the yield was one of the best they had ever had, and fully came up to expectations.

Mr. David Simpson, of Todds & Stanley, has just finished a trip through Missouri and Kansas. Speaking of wheat, Mr. Simpson reports the yield as extraordinary. The mills are grinding 4.25 bushels to the barrel, with a mixture of hard, at 59@60 pounds to the bushel, and soft at 60@63 pounds to the bushel.

Owing to the dull market many of the mills are shut down, and the few that are running are only on half time—just enough to supply the home market. Nearly all the mills are carrying a large stock on hand.

Apropos of this subject, I see that Kansas shippers are again up in arms against the present grain rate. It is evident that Kansas is not backward in making demands, going on the principle to ask for everything and then take what they can get.

Her latest request comes in the shape of a complaint before the Interstate Commerce Commission. A short time ago a petition signed by 20,000 grain men was sent in to the Kansas Railroad Commission, asking them to equalize the grain rates to Kansas City. On the refusal of this petition, they now make a formal complaint to the Interstate Commerce Commission; but as that body deals with more than Kansas, they wisely amended the petition to cover not only Kansas City, but also Memphis, Minneapolis and Galveston, with the states of New Mexico, Colorado and Arizona. They intend to try and get these rates down to those at present on St. Louis and Chicago. At present, under existing rates, they claim they cannot compete with other markets. Kansas, evidently, wants the earth, and there is about as much chance of getting it as of getting this last demand. I see that Kansas farmers are also on the point of organizing a stock company to protect prices on grain. The latest move in that direction is the organization of a stock company with a capital stock of \$25,000, all of which is taken, by 600 Kansas farmers. It is the intention to raise a fund of \$100,000 and build elevators, so that when an "Alliance" farmer is pushed for money he may store his grain in one of their warehouses, and they will loan him the money on it. In this way the grain will not be forced on the market to the detriment of prices. It is the intention to build these elevators all over the state, and thus control the grain product of the "Alliance." They believe they can thus command a price of \$1 or more on corn. The idea is being much agitated, and if it develops successfully we may expect to see it followed in Illinois and other "Alliance" states.

I am in receipt of a letter from Secretary Seybt of the Illinois Millers' State Association, giving an account of the 16th annual convention of that body, at Springfield, Ill., on December 3d.

President Kreider, of Jacksonville, presided. Prominent among those present were Messrs. Shureman of Germantown, Seybt of Highland, Sparks of Alton, Dow of Pittsfield, Cole of Chester, Shellabarger of Decatur, Brickey of Prairie du Rocher, Dean of Ava, Thayer of Springfield, Koenigsmark of Waterloo, Halliday of Cairo, Dorkenwald of Quincy, Thrall of Hancock. The report of the treasurer showed funds in treasury amounting to \$528. Mutual insurance and the state of the market furnished a theme for discussion. Secretary Kinney and W. L. Barnum, respectively of the Illinois Millers' Mutual and the Millers' National Insurance Companies, were present. After much discussion, in which it was brought out that nearly all the members had had personal experiences with many "wild-cat" insurance companies of Illinois, a resolution was adopted, calling the state's attention to these so-called mutual insurance companies, and asking that steps be taken to prevent their doing business in the state. After some discussion on crops, etc., the meeting adjourned.

I have to announce the death of one of the best and most widely known millers in this section. Charles A. Tiedemann, of O'Fallon, Mo., died at Pass Christian, Miss., Dec. 9th, at the age of 57 years. Mr. Tiedemann had been ill for some months, and had gone down South for his health. He owned a large mill at O'Fallon, Mo., another at Collinsville, Ill., besides large farming lands in St. Clair county. His estate is valued at \$350,000. The funeral takes place Sunday, Dec. 14th, from O'Fallon, a special train leaving St. Louis at 10:30 A. M., to take those of his friends and relatives who will attend.

Owing to the dull market, the output is much below the usual. Many of the mills are only running half time, while some few, owing to accidents, were shut down for a time. Among the latter were the Regina and Yaeger; the Planet and St. George, also, were shut down. The output of each mill was:

MILL.	THIS WEEK, DEC. 13.	LAST FOUR WEEKS.
Plant.....	8,550	32,500
Eagle Steam.....	5,500	22,000
Kehlor.....	7,400	29,000
Victoria.....	5,200	15,200 (3 weeks.)
Alton City.....	3,750	17,450
Camp Spring.....	3,800	14,500
Yaeger.....	1,200	8,000 (3 weeks.)
Hezel.....	3,000	8,000
Saxony.....	2,500	10,100
President.....	4,200	19,900
Jefferson.....	3,000	12,500
Regina.....	1,200	11,550
United States.....	2,900	11,500
Meramec.....	1,500	6,000
Carondelet.....	800	3,100
Planet.....		
St. George.....		
Crown.....		5,700 (2 weeks.)
Total.....	54,500	228,800

WALTER HOWARD BAIN.

St. Louis, Dec. 15, 1890.

OUR LONDON LETTER.

Crop Condition—The British Market—Effect of Financial Disturbance—New Grain Elevators in Russia—The "Koh-i-noor" Middlings Purifier—British Relations between Capital and Labor—Parisian Milling Awards, etc., etc.

BY the middle of the month sufficient rain had fallen to allow of solid land being ploughed for wheat, and sowing to be carried on under favorable conditions, so that in spite of frequent interruptions, wheat sowing may now be said to be practically complete. However, the next year's crop return will undoubtedly show a still smaller wheat acreage unless the farmers have made better use of the short favorable spell than could be expected from past knowledge of their habits. Reports from the continent generally, state that sowing operations have been completed most satisfactorily. Looking

back over the past four weeks, it is rather remarkable that the wheat markets in this country have not suffered any further loss than sixpence or ninepence per quarter of 492 lbs. from the panic in the money market. Luckily the money squeeze has not found grain dealers speculating, and millers have only been working the tides of demand and supply. The steadiness of value in wheat and flour is a matter of congratulation, especially so when we consider the warm weather that has been prevailing until three days since, and the bank rate of discount at 6 per cent. The preliminary official report of the wheat crop of Russia, exclusive of Poland, states that the quantity is 24,600,000 qrs., which is much less than previous reports indicated. The revised estimate of last year's crop was 22,284,700 qrs., while that of 1888 was 35,747,000 qrs., and the crop of 1887 was 33,624,000 qrs. Beerbohm gives 1,500,000 as the estimate of the crop of Poland, making the grand total for European Russia 26,100,000 qrs., from which 17,500,000 qrs. may be deducted for home consumption, leaving a surplus of 8,600,000 qrs. from the new crop. All figures connected with the Russian wheat crop are of the greatest interest as they have such an important bearing on the British milling trade. Speaking of the Russian grain trade, reminds me that from information received from St. Petersburg, the landowners are asking for authority to build grain elevators at Odessa, Sevastopol, Kherson, Nicolauf, Kertch and other ports on the Black Sea as well as on the navigable rivers and principal railway stations. American engineers would do well to look into this branch of the Russian grain trade and see if there is not a possibility of obtaining some of the contracts to build that will most likely be given out shortly. The society of Southern Cultivators are said to be considering the question of raising a capital of 24 millions by means of the issue of 5 per cent. debentures redeemable in 38 years.

As promised in my last month's letter I now have the pleasure of giving a few particulars of the Koh-i-noor middlings purifier which I saw working most satisfactorily yesterday. The manufacturers and sole agents are Thomas Robinson & Son, Limited, of Rochdale and the patentees a firm of flour millers, Parkinson & Sons, of Doncaster. The purifier is constructed on a novel principle and is the outcome of many exhaustive experiments and much patient research by the Parkinsons. The sieve is made in a taper form and has on each side a deposit platform which increases in width as it approaches the end or narrower portion of the sieve. The sieve is designed in this form in order to keep an even thickness of material on the silk surface. Thus, as the first fine middlings are sifted through the meshes of the silk at the head end of the sieve, the stream narrows by reason of the taper, so that the thickness is maintained and as the stock on the sieve becomes heavier in character as it travels towards the tail end of the machine, and consequently requires stronger treatment. The contraction of the sieve surface intensifies the upward air current and the simultaneous widening of the side deposit platforms provide increasing expansion room so that notwithstanding the strong exhaust at the tail end of the silk surface the instantaneous deposit of the lifted offal and the dustlessness of the machine is as perfect here as at the head end and the centre portion of the sieve. The space immediately above the sieve is divided into four sections and the upward air currents from the four divisions pass through the fan and then into the mill after having passed along a chamber immediately under the fan which is kept clean by a traveling brush. The fan thus discharges direct into the mill, the dust-

less air which is not impeded or baffled after it has passed through the middlings traveling on the surface of the sieve. The sieve to the purifier I saw at work was tapered down from 20 inches at the head to 5 inches at the tail end and had the fan revolving at 200 revolutions. The shaker feed at the head of the purifier with the taper sieve keeps all the silk surface constantly covered with an even thickness of middlings, notwithstanding that a portion is being sifted through the silk all the way round. As the silk is always covered the wind is thereby economized, it being impossible for it to reach the fan without having first come through a layer of middlings, and having done its work of purification, and by the silk surface being tapered, the wind comes through with increasing force so that less suffices. Thus, in the Koh-i-noor middlings purifier no cut-off or dead sheet is required as all the middlings that pass through the meshes of the silk are thoroughly purified.

According to the labor correspondent of the Board of Trade, despite the unsettled state of the relation between capital and labor, and the frequency of disputes resulting in stoppage of work, the returns for the month of the chief societies recording the number of their unemployed members show the condition of the skilled labor market to continue remarkably good. In all 21 societies have sent in their reports which show a total membership of 236,084 of whom only 5,690 are out of work, as against 6,197 for the previous month. The proportion last month was 2.60 per cent. unemployed but for this month it is 2.41 against the corresponding month in 1889. The general remarks of these 21 societies may be summarized as showing 13 very good, 5 good, and 3 moderate. There was however, no falling off in the number of strikes, 97 having been recorded during the month.

Miss Georgiana E. Ormerod, sister of the well known consulting entomologist to the Royal Agricultural Society recently published a well executed colored diagram of the Hessian fly, showing the insect in its different stages, greatly magnified and in its natural size, with representations of the effect of its attack upon cereal plants.

At last the long talked of telephonic communication between Manchester and London, has been established. The distance is 219 miles, the line running through Macclesfield, Birmingham and Coventry. The wire is hard drawn copper, 11½ B. W. G., and a wholly metallic circuit is arranged.

A promise, I learn, has been given by the executive authorities of the Paris Exhibition, that the diplomas and medals for the British section will be ready in a few days. All exhibitors who have received an award superior to "Honorable Mention," are to have a bronze medal with a diploma stating the value of the award, nominally silver, gold or "Grand Prix." Exhibitors who had "Honorable Mention" are to receive a diploma only. The *Diplomes Commemoratifs*, or complimentary diplomas for jurors, contributors to the Loan Exhibitions and others will follow later.

The French Consul at Odessa, writing on the navigation of that port in 1889 says: The movement of the navigation of Odessa during the past year has suffered from the stagnation of the market. There entered into the port during the preceding year (1888) 1,313 steamers, with a total displacement of 1,714,774 tons, while in 1889 there only entered 1,225 steamers, with 1,489,271 tons, showing a decrease in tonnage of over 18 per cent. Clearing the port there were noted 1,269 vessels with a burthen of 1,570,096 tons. In 1888 clearances were represented by 1,305 steamers, carrying 1,666,668 tons, or a difference of nearly six per cent in favor of that year. As regards sailing

vessels the situation of 1889 was more favorable, showing an increase of about 29 per cent over 1888. L. MAYGROVE. London, Dec. 3, 1890.

TRADE NOTES.

The Superlative Purifier Mfg. Co., of Milwaukee, Wis., have recently shipped New Era Scalpers to the following parties: Hill Bros., South Bend, Ind., (8 machines); George Most & Sons, East Dubuque, Ill.; Chubbuck & Nichols, Kidder, Mo.; W. D. & A. Garrison, Vernon, Mich.; Bates Bros. & Co., Winchester, Ind.; Wellington, Shalk & Co., Anderson, Ind.; Washington Mill Co., Eau Claire, Wis. (2 machines); Gwinn Bros., Huntington, W. Va.; Phil. Orth & Co., Erfurt, Wis.

The Superlative Purifier Mfg. Co., of Milwaukee, have an order for 14 New Era Scalpers, from the United States Starch Works, Waukegan, Ill.

The Cockle Separator Mfg. Co. of Milwaukee, have lately furnished Cockle Separators to W. H. Ridenbaugh, Boise, Idaho; C. E. Haage, West Union, Ia.; St. Francis Milling Co., St. Francis, Minn.

The Superlative Purifier Mfg. Co. of Milwaukee have shipped Purifiers to Yankton Pressed Brick Co., Yankton, S. Dak.; W. Thompson, Canon Falls, Minn. (2 machines); Meek, Finger & Co., Marietta, Ill.; and Chas. Stunkard, Ferryville, Wis.

The Vortex Dust Collector Co., of this city, who have been behind orders for sometime have increased facilities, and are now in shape to fill orders promptly. They report a good trade.

N EWS.—At Columbiaville, Mich., Nov. 20, the large flour mill and elevator, containing about 5,000 bushels of wheat, belonging to William Peters, were burned. The loss is \$50,000; partly insured.

At Decatur, Ind., Nov. 18, the elevator of J. Niblack & Son was burned.

McCULLY & BRIGGS, millers at Joseph, Ore., are succeeded by the Joseph Milling Co.

Geo. W. COLLIVER of the firm of Colliver & Huston, millers at La Fayette, N. J., is dead.

BAKKE BROS.' 75-barrel mill at Elbow Lake, Grant Co., Minn., is about completed.

The Alton Milling Co., with a capital stock of \$40,000 has been incorporated at Alton, Iowa.

The Ortonville Roller Milling Co., succeeds the John Kaercher Milling Co. at Ortonville, Minn.

CONANT & SON's flour mill at Terre Haute, Ind., was burned Nov. 30. Loss \$12,000; insurance \$5,000.

ARTICLES of incorporation have been filed by the Slaughter Milling Co., at Slaughter, Wash. Capital stock \$25,000.

The Edw. P. Allis Co., of Milwaukee, Wis., is building a 150-barrel mill for Isaac Staples at Stillwater, Minn.

At Baltimore Md., Nov. 23, fire partially destroyed the flour mill of J. Olney Norris. Damage, \$15,000; fully insured.

The Zenith mill at Minneapolis, Minn., which is now owned by the Sidle-Fletcher-Holmes Co., is being overhauled.

The Bonus-Milner Milling Co. have completed their 500-barrel mill at Sioux City, Iowa, and are now ready for work.

The Winona Mill Co., of Winona, Minn., has brought suit against the Manufacturers' Mutual Fire Ins. Co., for \$2,074.34 on an unpaid loss.

CHESTER D. WRIGHT, a former well known board of trade man of Duluth, Minn., has purchased a half interest in the Duluth roller flouring mill.

At Cedar Rapids, Ia., Nov. 22, the elevator of the Bosch Elevator Co. was burned. There was a total insurance on building, machinery and grain of \$63,000.

At Keokuk, Ia., Dec. 11, the factory of Keokuk Cooperage Co., located beside the track of St. Louis, Keokuk & Northwestern Railroad, was burned. Loss \$6,000.

At Grant, Neb., Dec. 11, elevator of Pringle & Son was burned. It contained 2,000 bushels each of wheat and corn, which were consumed. Loss \$6,000; insured for \$5,000.

SHIPMENTS of wheat and flour reckoned as wheat, from Duluth, during the season of lake navigation, were equal to 28,128,000 bus. of wheat, against 23,397,084 bus. last season.

At Green Bay, Wis., Nov. 21, the large cooperage works of D. W. Britton were burned. The fire is supposed to be of incendiary origin. Loss about \$70,000; insurance nominal.

At Hawthorne, Ill., Dec. 9, the grain warehouse, owned by neighboring farmers, was destroyed by fire, together with its contents, over 12,000 bushels of wheat. Loss \$20,000; insurance \$7,000.

Nov. 24, at Tippecanoe City, Ohio, the flouring mill and elevator of the Dietrich Milling Co. were burned. Loss on mill, machinery and stock about \$15,000; loss on elevator \$1,500; insurance \$14,000.

At Cedar Rapids, Iowa, Nov. 22, the elevator of the Bosch Elevator Company, near the St. Paul tracks, was burned. The building is a total loss. Barley to the amount of 198,000 bushels was destroyed.

At Burlington, Iowa, Nov. 25, the large Harris elevator, leased by the Burlington Lined Oil Company as a storage house, collapsed and 80,000 bushels of flax seed, valued at \$50,000 was emptied into the street.

At Sandusky, O., Dec. 11, the grain elevator belonging to the C. C. C. & I. Railway, together with several adjacent buildings, also the property of the Company, were burned. Loss \$40,000; insurance \$30,000.

H. R. HEATH whose oatmeal mill was recently burned at Des Moines, Iowa, will build a 150-barrel mill at Fort Dodge, Ia., at a cost of \$75,000. A free site and other considerations have been donated by the city.

At Iola, Kan., Dec. 8, the elevator and mills, Thayer & Gilmore, proprietors, were burned. About 6,000 pounds of flour and several hundred bushels of wheat and corn were destroyed. Loss, \$10,000; insurance, \$4,000.

At Milford, Del., Oct. 21, the flour mill owned by Peter T. Causey was burned. Loss \$1,600; insurance \$9,000. The building, a frame one, was an old landmark, having been built prior to 1803. Mr. Causey will rebuild.

At Decatur, Ill., Nov. 21, the Wabash freight-house, with contents and two freight cars, the Union Transfer elevator, lately erected by Pratt Bros., at a cost of \$18,000, were burned. Insurance on elevator \$12,000.

J. BECHTOLD & SONS, of Tremont, Ill., whose mill was lately destroyed by fire, have let the contract for a new one of 50-barrels capacity. It will be a complete roller mill in every respect, and run by steam power.

IN Kentucky, opposite Portsmouth, Ohio, Nov. 22, South Portsmouth Flouring mills were burned. The mill was owned by M. H. Miller. Loss about \$10,000; insurance, \$3,000 in American and People's Mutual, of Philadelphia.

The Geo. T. Smith Purifier Co.'s property at Jackson, Mich., is to be sold Jan. 2. The appraised value is \$69,000, which includes buildings, 17 acres of land, machinery, etc. The buildings could not be duplicated for \$100,000.

The steam power elevator and contents, belonging to John Heery, situated on the C., St. P. & K. C. railroad, at Clarksville, Iowa, was totally destroyed by fire, Dec. 9. The fire originated in the engine room. Loss estimated at \$60,000; no insurance.

The extensive barrel and stave works of B. F. Horn & Co., situated near the relay depot East St. Louis, were entirely destroyed by fire Nov. 29. Loss \$75,000; insurance, \$25,000. The fire originated in the engine room from what cause is not known.

The report of the Illinois State Board of Agriculture shows that the Hessian fly is present in nearly all the area sown to wheat. The extent of the damage is not definitely known but is serious enough to warrant the issuing of a special bulletin.

At Ontario, N. Y., Nov. 27, the steam roller mills owned by H. Hill's estate and operated by John Pye, were burned. Loss \$8,000; insurance \$4,000. There were about 1,000 bushels of wheat and about 200 bushels of beans in stock, valued at about \$1,700.

The Menasha Wood Split Pulley Co., of Menasha, Wis., have received orders for their Hickory Pulleys from Waterbury Buckle Co., Waterbury, Conn.; Everson & Co., Marathon, N. Y.; Chas. E. Bell, Amsterdam, N. Y.; Pittsburgh Clay Mfg. Co., New Brighton, Pa.

The Foote Bros.' flouring mill at Oshkosh, was sold to Charles Barber for \$19,226.61. The property was sold to pay mortgages amounting to about \$23,000. A stock company has been organized under the name of The Foote-Cornish Milling Co., to run the mill; capital stock \$50,000.

At Bennington, Neb., Nov. 30, the elevator owned by Peter Dreesen of Creighton, Neb., and run by J. G. Blakeslee, was burned together with about 3,000 bushels of grain. Supposed to have been caused by hot boxes. Insurance on elevator, \$3,500; no insurance on grain. Loss \$6,000.

AMONG the orders recently received by the Menasha Wood Split Pulley Co., Menasha, Wis., are the following: Rope transmission for the Racine flour mills, and John Rice Bros. of Henoitville, Wis.; National Starch Co., Ottumwa, Ia.; Anding flour mill, Winona, Minn.; A. J. Phillips & Co., Fenton, Mich.

OUR LEGAL DEPARTMENT.

Specially prepared for The United States Miller and Milling Engineer, from the latest decisions.

ENFORCEMENT OF CONDITIONAL SALE OF MACHINERY.—A manufacturing Company placed in its mill certain machinery for which it gave its notes, agreeing that the title thereto should remain in the seller until the notes were paid, and that should any portion remain unpaid at the maturity of the notes the seller should have the absolute right to remove the machinery as his own property, and that any payments which had been made upon the notes should be considered to have been made as payment for the use of the machinery. Before the maturity of the notes and before they had been paid in full, but after partial payments had been made on them the company assigned, and its assignee tendered the machinery back to the seller in payment of the balance due on the notes. This was refused and a claim filed against the assignee for the balance due on the contract. It is held that this contract constituted an absolute agreement by the company to pay for the machinery and that the claim for the balance can be enforced against the assignee, and payment of it enforced against the assets of the estate.

Appeal of Beach, Supreme Court of Errors of Connecticut, 20 At. Rep. 475.

PREVENTING BREACH OF CONTRACT FOR PERSONAL SERVICES.—Where an employee has not covenanted that he will not enter the employ of a rival business concern, the mere fact that he is familiar with the business and customers of his employer, which familiarity will be of special value to the business competitors of his employer, will not justify a court in issuing an order preventing him from entering the employment of such rival. The breach of a contract for personal services will not be restrained, by injunction where the services are of such a nature that any one of ordinary intelligence can perform them, and where, if there is any damage from its breach, adequate remedy is provided by action at law for the recovery of damages.

Wm. Rogers M'ing Co. v. Rogers, Supreme Court of Errors of Connecticut, 20 At. Rep. 467.

RESPONSIBILITY OF PRINCIPAL FOR ACTS OF AGENT.—While it is true that one who transacts his business through an agent is bound, not only by the authority which he actually gives, but as well by that which the legitimate exercise of the authority he actually gives, would reasonably lead one to infer was given. But authority for an agent to buy and ship goods and make cash advances thereon, does not raise a presumption that the agent is authorized to guarantee that a certain price be paid by the principal at the end of 30 days. This implied authority which will bind the principal by the acts of the agent, is such authority as the agent appears to have by reason of the authority which he actually has, or which he is shown to exercise with the knowledge of his principal, and without objection.

Oberne v. Burke, Supreme Court of Nebraska, 46 N. W. Rep. 839.

NEGLIGENCE IN CARE OF FREIGHT.—Where a contract for the shipment of goods is entered by one who has notice that the fulfillment of it by the company will be attended by natural difficulties over which the company can have no control, and has notice that there may be necessary delay in the transportation, the shipper cannot recover for goods destroyed by fire in a warehouse where they were stored awaiting shipment, on the ground that had they been promptly forwarded they would not have been in the warehouse at the time of the fire, the bill of lading exempting the company from liability for the loss by fire. Had the fire occurred, or the goods been delayed by the inexcusable negligence of the company, it would be liable, but for a loss resulting from the delays of which the shipper had full no-

tice, by a fire which was not caused by the negligence of the company, no recovery can be had.

Hornthall v. N. & B. S. Co., Supreme Court of North Carolina, 11 S. E. Rep. 1049.

DAMAGES FOR DELAY IN DELIVERING MESSAGE.—Where a telegraph company received the following message: "Come in haste, your wife is at the point of death,"—and failed to deliver the same within eight days, or until the receiver was notified by mail that such messages were sent and by such delay was prevented from being present at his wife's death, or attending her funeral, he is entitled in addition to the nominal damages, to recover compensation for the mental anguish inflicted on him by the negligence of the telegraph company.

Young v. Western Union Telegraph Co., Supreme Court of North Carolina, 11 S. E. Rep. 1044.

ASSIGNMENT OF CREDITOR'S LIFE INSURANCE.—Where a life insurance policy is issued on the life of a debtor in favor of a creditor, and the creditor afterwards goes into insolvency but retains from the assets the policy which he afterward assigns to another, the administrator of the insured after his death cannot recover the amount from one to whom it was transferred on the ground that after a general assignment for creditors the original beneficiary could pass no title to creditor's insurance, as if this was so, the fund would go to the assignee of the beneficiary and not to the administrator of the insured.

Shoak v. Meily, Supreme Court of Pennsylvania, 20 At. Rep. 515.

CONSTRUCTIVE ASSUMPTION OF RISK BY EMPLOYEE.—A manufacturer of machinery was delivering a large fly-wheel at a factory and the employees of both the machinery manufacturer and the mill were jointly engaged in unloading it. The foreman of the manufacturer called for help and the foreman of the mill ordered one of his men to go and assist. While complying with this order he was caught under the wheel and injured. By obeying an order which took him outside the scope of his regular employment the injured employee voluntarily assumed the relation of fellow servant to the other employees of the manufacturer and assumes the risk of their lack of skill, and he cannot recover for the result of their negligence.

Wischam v. Rickards, Supreme Court of Pennsylvania, 20 At. Rep. 532.

RECOVERY OF USURY VOLUNTARILY PAID.—One can recover back usury which has been voluntarily paid, and where he has confessed judgment for the whole amount of a debt, part of which is usury, he may, after entry of judgment, have it opened up as to the usurious part of it, and set up that defense as to that part.

Marr v. Marr, Supreme Court of Pennsylvania, 20 At. Rep. 592.

BOOKS OF ACCOUNT AS EVIDENCE.—A book which is not the book of original entry cannot be introduced in evidence to prove an account. The original entries must be presented, or the delivery of the goods proved in some other way.

Dooley v. Moom, Supreme Court of New York, 11 N. Y. Supp. 239.

RECISSION OF SALE FOR FRAUD.—Such fraud as will warrant the recission of a contract for the sale of goods, and to authorize the seller to retake them, must consist of false representation, malice, deception and injury, and each of these elements must be shown. A statement made by a purchaser in the month of April as to his solvency, cannot be regarded as a representation affecting a sale made in the following October.

Hotchkiss v. Third National Bank of Malone, Supreme Court of New York, 11 N. Y. Supp.

RESPONSIBILITY OF SAFE DEPOSIT COMPANY.—A safe deposit company is charged with extreme care in the protection of property deposited with it, and must use

every means within its power to protect it. Where officers of the law appear with a proper search warrant for the property of a safe-renter, they may be permitted to take under such warrant the actual property described in such warrant, but if they attempt to remove any property not enumerated and properly described in the warrant, it is the duty of the safe-deposit company to prevent them, and if unable to prevent its removal the company must at once regain possession by legal means. Failing in this, the company is liable to the owner for the full value of the property so taken.

Roberts v. Stuyvesant Safe-Deposit Co., Court of Appeals of New York, 25 N. E. Rep. 294.

CONTRACT OF EMPLOYMENT TO "CLOSE OF SEASON."—Where a contract of employment is entered into for "the season" in construing the contract the Court will ascertain by proof what constituted a "season" according to the usage of the trade or calling in which the contract was made, and if the happening of any contingent event would ordinarily have the effect of closing for the season the operations of the employer, then the happening of that event at any time would operate to terminate the contract.

Strakosch v. Strakosch, City Court of New York, N. Y. Supp. 251.

LIABILITY OF BANK FOR DEPOSIT OF FORGED CHECK.—A customer of a bank took to it a check to be cashed which the cashier refused to cash because it had some appearances of having been raised. It was accepted for collection, and forwarded to a correspondent of the bank which credited it with the check. It was then credited to the depositor. Subsequently it came back from the bank on which it was drawn, rejected because it had been raised from the amount for which it was originally drawn. It was then charged to the depositor's account. The latter was not entitled to recover this from his bank on the ground of negligence, nor did the fact that it had been, under these circumstances credited to his account give him the right to recover.

Rapp v. National Security Bank, Supreme Court of Pennsylvania, 20 At. Rep. 509.

ACCEPTANCE OF LESS THAN DEBT AS PAYMENT.—Where suit has been commenced upon a debt the voluntary acceptance by the plaintiff of a sum less than the full amount not only discharges the defendant from the debt, but relieves him from liability for the costs, and where a creditor has accepted such payment after the commencement of suit it is not necessary for the debtor to appear and plead the payment, but the judgment subsequently taken by the creditor is fraudulent and its enforcement will be restrained.

Gates v. Steele, Supreme Court of Errors of Connecticut, 30 At. Rep. 474.

SALE OF SEED WHEAT.—A note which is taken for "seed wheat" and is filed in the office of the register of deeds as required by the seed grain act of Minnesota, becomes a valid lien upon the product of the said seed, and has the same force as a chattel mortgage, duly executed and filed.

Warder Bushnell, Glessner Co. v. Minnesota & D. E. Co., Supreme Court of Minnesota, 46 N. W. Rep. 773.

NEGLIGENCE IN LEAVING ELEVATOR SHAFT OPEN.—A teamster who was engaged in taking goods away from a store, and was working near an open elevator shaft, was knocked from the wagon and fell through the shaft, by the carelessness of his helper in handling a large bale of goods, though it is incumbent upon those in charge of an elevator shaft, to keep it protected, yet the injury in this case was so palpably the result of carelessness by the fellow servant of the one injured, that as a matter of law he cannot recover.

Moll v. Riverside S. & C. Co., Supreme Court of Michigan, 46 N. W. Rep. 776.

CONDITIONAL SALE OF STOCK OF GOODS.—Where the owner of a stock of goods sells it and receives a large part of the consideration in cash, taking notes for the balance, and the purchaser is in possession, he cannot, after an assignment by the purchaser, recover back the goods, on the strength of a verbal agreement that the title should not pass until the notes were paid.

Ryder v. Cooley, Supreme Court of Errors of Connecticut, 20 At. Rep. 470.

PASSAGE OF TITLE ON SALE OF UNSEGREGATED GOODS.—Where goods are sold by number, weight or measure at a certain price per unit of measurement, the title does not pass until the goods are separated from the bulk, of which they are a part, and although the price may have been paid, they are still at the risk of the seller and he is responsible for their loss or damage.

Rosenthal v. Kahn, Supreme Court of Oregon, 24 Pac. Rep. 989.

UNAUTHORIZED SALE OF COMMISSION GOODS.—Where goods are consigned to a firm to be sold on commission, the price and terms on which they were to be sold being specified, the agent is liable to the owner if he sells them for less than he was directed. He is liable for the difference between the price made by the owner and the price he sold them for, less the commission on that amount, to which interest thereon from the time the sale was made must be added.

Union Hardware Co. v. Plume & A. Mfg. Co., Supreme Court of Errors of Connecticut, 20 At. Rep. 455.

CONSPIRACY TO DAMAGE BUSINESS.—Where persons conspire together to injure the business of another by circulating false reports of his financial condition and business habits among his customers and creditors, a civil action will lie for the damages sustained, and the essence of the action is not so much the conspiracy, which is merely an incident, as it is malice which is the element of the offense.

Van Horn v. Van Horn, Supreme Court of New Jersey, 20 At. Rep. 485.

LIABILITY OF EMPLOYEE.—An employee who is engaged under a contract which requires him to devote all his time to his employer is liable to the employer for the value of any time he may devote to his own business, and where he uses in business of his own, property delivered to him to be used in the business of his employer, he is responsible for its value.

Waterhouse v. Stebbins, Supreme Court of Errors of Connecticut, 20 At. Rep. 480.

MILWAUKEE ITEMS.

To enable every reader to keep track of time the coming year, he should mail his address on a postal card to the Edw. P. Allis Company, Milwaukee, Wis., and receive in return a handsome 1891 steel engraved calendar, showing views of the new U. S. Navy.

A. V. H. CARPENTER, who has been general passenger agent of the Chicago, Milwaukee and St. Paul Railway since 1862, has resigned his position on account of physical disabilities. He has been blind for nearly a year. No man in railroad circles is more kindly thought of than Mr. Carpenter, who has long been known as the father of general passenger agents. He is succeeded by Mr. Geo. H. Heafford, a gentleman of large experience and great executive ability.

The Cockle Separator Manufacturing Co., of this city, who, owing to their increasing business, have found their old quarters too small, have just removed to Nos. 66, 68 and 70 Third street. The building is two stories in height, with a high basement, and is being fitted up with a complete power outfit, and the necessary machinery for manufacturing their line of machines. The offices are situated on the first floor, and being located within half a block of the Union Depot, are very convenient of access to visiting millers. The company design using the new building principally as a machine shop and still retain their large factory on North Water street, as a wood-working shop. They are now in better shape than ever for filling orders promptly, and will be pleased to hear from anyone in need of anything in their line.

[From Special Correspondent of THE UNITED STATES MILLER.]

THE MILLERS' EXPOSITION IN CHILI, SOUTH AMERICA.

THE opening of the milling exposition in Santiago de Chile took place at 3 o'clock in the afternoon of October 30th, in the presence of a large assembly. The building consisted of an immense quadrangle made up of four fine exhibition buildings, a graceful pavilion, two extensive wings, and a large tent.

On the south side of the building were in operation the mills of Bordier, of Lerlis, France; Maerky, Haller & Co., of Aaran, Switzerland; A. Millot, of Zurich, Switzerland and the bakery of Joseph Baker & Sons, of England.

On the north side, the mill of G. Daverio, of Zurich, and a large motor of 76 horse power, which, by means of subterranean wheels and cylinders, furnished the motive power for the numerous mills and bakeries, besides a tent for a restaurant.

The west side of the quadrangle was occupied by a vast wing, in which were exhibited numerous implements, machines and utensils for milling purposes.

Of the mills exhibited, Bordier's required 9 horse-powers for a capacity of 133 quintals in 24 hours; Daverio's 10 to 12 horse-powers for 5,000 to 5,500 kilograms per 24 hours; Maerky, Haller & Co's machinery was more complicated than the rest, and required 25 horse-powers for grinding 200 quintals in 24 hours. A. Millot's mill required 15 horse-powers for 153 quintals in 24 hours.

The bakery was provided with all the apparatus and accessories necessary for the production of bread and pastry of the most approved kind, and distributed its products freely among the visitors, to their evident satisfaction.

The power was furnished by one of Schneider & Co's creosote motors, from which a subterranean duct, in the shape of a canal, as stated before, carried the shafts and belts to the various machines.

The illumination was entirely electric, partly on the arc-light system of Ganz, each lamp absorbing an electro-motive force of 50 volts, and partly on the incandescent system of Edison-Swan, with 10 to 16 candle-power to each light.

In the remaining portion of the complex of buildings were exhibited such a vast number of machinery and apparatus of all kinds, of so varied uses and complicated mechanism that it almost baffles description. There were triturators, cleaners, hand-mills, turbine wheels, washers, gas-motors, printing presses, kneaders, perforators, ventilators, sack sewers, etc., etc. The principal exhibitors in this department were Gunther & Co., Carlos Klein, Thomson Ray, Trickler & Kupper, Gustave Heyermann, Fernand Boudroux, R. A. Carrasco, Julius Leroy, etc.

In addition to all these, there were also exhibited two portable railroads, one by Valentin Lambert, and the other by G. Belliard, of which the former was thoroughly equipped with all the necessary running apparatus. SANTIAGO.

THROUGH the courtesy of Mr. H. C. Thom, Wisconsin State Dairy and Food Commissioner, we are in receipt of an advance copy of his first annual report in which he gives the composition through chemical analysis of various articles in common use in the preparation of eatables. Special attention is given to milk and productions therefrom, baking powder, vinegar, syrups, and spices, and the several subjects are exhaustively treated. There is no doubt that since the State legislature created the office of Dairy and Food Commissioner, in 1889, the adulteration of articles subject to his inspection has materially decreased, and as the maintenance of the office, has for its object the total abolishment of adulterating articles used for food, drinks or drugs, the amount expended is well appropriated.

THE VORTEX DUST COLLECTOR.

This machine has met with a warm reception at the hands of the trade and has been adopted exclusively by many of the best mills in the country. The machine as will be seen by the illustration herewith, consists of a sheet iron cylinder with an inner cylinder for the discharge of air freed from dust and a conical hopper or settling chamber underneath with an opening through which the dust is discharged. The dust-laden air enters through an opening in the side at the upper end of the cylinder and passes through the space between the outer and inner cylinder, which is provided with a spiral through which the air is blown. The dust being heavier than the air is thrown to the outer casing of the machine



THE VORTEX DUST COLLECTOR.

by centrifugal force, where it is kept, gradually descends along the case to the conical hopper, and finally through the opening below. The air meanwhile, relieved of the dust, passes through the discharge opening in the top. It will be seen that there are no parts to become worn, and after the machine is properly connected and regulated it will need no attention. The advantages of this Collector over those straining the air through cloth will be readily appreciated by millers. This machine is manufactured by the Vortex Dust Collector Co., Nos. 66-70, Third St., Milwaukee, and full and minute information concerning its construction and advantages can be had by addressing the company as above.

MAPLE SPLIT CONE PULLEYS.

Among the numerous kinds and infinite variety of wood split pulleys made by the Menasha Wood Split Pulley Company, are hard maple bevel cone pulleys, maple step cone pulleys, and hickory bent rim step cone pulleys.

We illustrate some of the cone pulleys, which will give our readers some idea of how they look. They are of a handsome and neat design, and still so strong and durable that they will not wear out.

They are called split cones because they are opened up and put on the shaft at any



MENASHA BEVEL CONE PULLEYS

point without cutting keyseats or taking down the shaft.

Cones would be used more as a means of increasing or reducing speed if it was more generally known that any size or kind could be had at the same price as other pulleys. To provide iron cones it is always necessary to make special patterns from which to cast, rendering the cost much greater than the cost of these cones, which are guaranteed to be as durable and reliable as any cast cone. These cones are now used in all kinds of mills and factories, and on all varieties of machinery.

A ROLLERMAN'S DUTIES.

THE points requiring most attention on a roller floor are thus described by a competitor for one of our recent prizes:

The special points requiring a roller's attention are—To see that the wheat coming to the rolls is clean; to make a good first break with as little waste as possible; to make as much middlings with as little break flour on the second, third and fourth breaks; to commence to clean his bran on the fifth, so as to leave enough work for the sixth break to deliver the bran clean; to look after the scrapers and see that no dust or middlings are taling over; to see that the first reduction rolls are not grinding hot, but just breaking the middlings, so as to free any offal that is left clinging to the middlings, making as many fine middlings for the third reduction; to gradually work the various products and cut-offs to a clean finish, considering the clearness and granular feeling of the flour; to keep belts in good working order; to take notice of the condition and purity of the stock coming to the rolls; to keep an even feed on the rolls; see that the scrapers are in good condition, and everything in relation to the rolls cool and in good working order; to have the gearing working smoothly and well lubricated, as well as the bearings; to see that his cleaner and sweeper have the bearings free from dust and grease, and the floors clean, and chokes sent to their proper places, avoiding as little waste as possible.

The adjustments liable to get out of order would be pressure levers or springs; this is often due to the pivots or bolts becoming twisted in their seats, thus preventing the freedom of action and accurate setting; the rolls getting off their parallel, thus causing them to work closer at one end than the other; the defective working of the scrapers, caused either by wear or improper adjustment, thus causing a ring of material to form around the roll, and stopping the reduction at that part; an uneven flow of stock owing to disarrangement of feed-gate would be responsible for bad work done by the rolls, and is, in fact, a frequent cause.

Another competitor says:

A careful rollerman will keep his machines in efficient order; watching for any signs of weakness or undue wear, he will always give special attention to the feeds, noting any particular change which may take place. A rollerman must know this in practice. It will be found that by far the greatest number of mishaps which occur to roller mills in actual work are directly due to failure in one or other of the following four directions, viz:

- (a) The feed arrangement.
- (b) The pressure tackle.
- (c) The parallelism of the rollers.
- (d) The scrapers.

Assuming that such initial requirements as those of proper speed, differential motion, etc., have been attended to. In speaking of the feed arrangement, I refer not only to the mechanical requirements, but to what is of even greater importance, the correct division of material, so that no set of rollers shall be expected to reduce stock which is of such diverse size as to render it practically impossible for any mill to properly treat it. Hence the value of subdividing and grad-

ing the stock in such a manner, so that like material shall be rolled with like. Uneven flow of stock, owing to an imperfect arrangement of feedgate is responsible for a lot of bad work, which is too often laid at the door of the rollers. What is wanted is a screw-gate adjustable at either end; the one-screw gates are palpably ill-conceived.

Difficulty with the pressure-levers and springs causes trouble sometimes. A good plan is to take pressure levers apart once in three months and give all the joints a cleaning, and it pays well for doing so. The

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parallel condition of rolls is so necessary to good work that I may say that the men who attend to the roller mills cannot be too careful in seeing that each roller is parallel with its fellow, and to this end a small surface plate, having four raised level points in the plane should be applied to each pair whenever a stoppage for cleaning allows it to be done.

The efficiency or otherwise of the scrapers has a direct bearing on the work of a pair of rollers, as it is impossible to get good work done unless the rollers are kept quite clean. The ring of material which forms on the surface stops reduction at that point almost entirely, and unless the scraper is capable of adjustment, a fresh one should be applied.—*The Millers' Gazette*, (London.)

The Winter Resorts of Florida and the Sunny South.

At no time in the history of southern travel have the indications pointed to so brilliant a season at the Winter Resorts of Florida and the South as is promised for 1900-01. At Jacksonville, St. Augustine, and along the Indian River extensive preparations have been made for the entertainment of northern guests, and all visitors can rest assured of the old-time hospitality for which the southern host is famous. With its customary enterprise, the Big Four Route, "The Great Florida Line," has placed on sale round-trip tickets at greatly reduced rates, and made special preparations to handle the southern tourist business. All persons contemplating a trip to Florida should ask for tickets via that popular line. Solid vestibule trains run daily between Chicago and Cincinnati, equipped with private compartment buffet sleeping-cars, and elegant parlor cafe dining-cars, lighted by gas and heated by steam, making direct connection in Central Union Depot at Cincinnati with through trains for all points in the South. Ask for tickets via the Big Four Route.

D. B. MARTIN,
General Passenger Agent,
Cincinnati, O.

We shall be pleased to receive from any of our readers, short, crisp, sensible letters on subjects of interest to the flour and grain trade for publication.

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RECENT MILLING PATENTS.

The following is a list of patents relating to Milling and Grain-handling appliances granted during the month of November, as specially reported for the U. S. MILLER, by Chas. E. Brock, Patent Attorney, Pacific Building, Washington, D. C.:

- No. 480,821. Flour-dresser, J. M. Lemmon, Des Moines, Ia.
No. 480,905. Apparatus for washing grain, H. Smith, Milwaukee, Wis.
No. 440,072. Grinding-mill, J. R. Tobin, Charleston, S. C.
No. 440,167. Roller-mill, N. W. Holt, Manchester Mich., assignor to the G. T. Smith Middlings Purifier Co., Jackson, Mich. This patent covers the combination, with the frame of the mill, of the non-yielding roll, the yielding roll arranged in the rear of the non-yielding roll, carriers between the yielding roll and the frame of the mill, roller-bearings sliding on the carriers, springs to thrust the yielding roll forward, and stops which limit its forward movement, substantially as set forth.
No. 440,301. Machine for separating flour, W. G. Boorman, and E. J. Donohue, Maunton, Wis.
No. 440,334. Grain-meter, H. E. Hawk, Bucyrus, O.
No. 440,353. Automatic grain scales, H. E. Hawk, Bucyrus, O.
No. 440,480. Roller-mill, L. E. Cruger, Canton, S. D.
No. 440,613. Grain-scales, P. R. Grabill, Millersburg, Pa.
No. 440,634. Separating machine, N. W. Holt, Manchester, Mich.
No. 440,740. Scale beam for grain-weighers, C. H. Cooley, F. R. Richards, Hartford, Ct., assignors to the Pratt & Whitney Co., same place.
No. 440,794. Grain-weighing machine, C. H. Phillips, Boston, Mass.
No. 440,865. Preparation of cereals, F. Laubhoff, Detroit, Mich. This covers a new article of manufacture, the product of corn, said product consisting of hulled and purified compressed films made from the raw material retained in its normally-dry character.
No. 440,883. Gravity scalper, F. Noble, Minneapolis, Minn.
No. 440,920. Feeder for roller mills, L. Lash, Waverly, Mo.
No. 440,975. Process of manufacturing flour, H. Tunter-Cleveland, O. The process herein described of making flour, and consisting essentially, first, in reducing the grain and eliminating therefrom the germ element, and second, in incorporating a small percentage of sugar in the product, substantially as set forth.
No. 440,981. Separator for cotton-seed oil-mills, M. Wallace, Little Rock, Ark.
No. 441,140. Dust-collector, G. A. & J. P. Culver, Blue Springs, Neb.
No. 441,225. Automatic grain-weighing machine, W. T. Black, Crittenden, Ill.
No. 441,301. Grain-measure, M. A. Harmless, Schell City, Mo.
No. 441,359. Driving-belt, C. H. Douglas, Chicago, Ill., assignor of part to M. F. Seely, Fremont, Neb., and Dayton, Poole & Brown, Chicago, Ill.
No. 441,372. Separating machine, O. M. Morse, Jackson, Mich.
No. 441,451. Weighing-truck, H. W. Thurston, Brooklyn, N. Y., assignor to E. N. Downs, same place.
No. 441,623. Feeder for flour mills, J. E. Welch, Petersburgh, Ill., assignor to T. W. McNeely, same place; S. T. Welch executrix of said J. E. Welch, deceased.

CURIOUS DATE FIGURING.—A gentleman was showing a curious thing in the State House this noon—showing how to tell the day of the week of any date. He gave the following formula, which can be tried by any one: Take the last two figures of the year, add a quarter of this, disregarding the fraction; add the date of the month and to this add the figure in the following list, one figure standing for each month, 3-6-6-2-4-0-2-5-1-3-6-1. Divide the sum by seven and the remainder will give the number of the day of the week, and when there is no remainder the day will be Saturday.

As an example take to-day, March 19, 1890. Take 90, add 22, add 19, add 6. This gives 137, which divided by 7 leaves a remainder of 4, which is the number of the day, or Wednesday.—*Providence Telegram.*

WIDE AWAKE,

beginning with the Holiday Number,

1891 is permanently enlarged to 100 pages, one hundred pages, radiant with new and larger type, a new style of page, and fresh, strong literary and pictorial attractions.

MRS. BURTON HARRISON, whose story of "The Anglomaniacs" has been the sensation of the season in the Century, has written for the WIDE AWAKE a story called "Diamonds and Tons."

HON. JOHN D. LONG (ex-Governor of Massachusetts) furnishes six articles, under the general title of "Our Government," for the enlightenment of coming citizens—the boys and girls of to-day.

KIRK MUNROE, who lately lived for a time the life of a railroad man, in all phases from parlor car to cattle cage, has put his experience into a thrilling serial for boys called "Cab and Cooches." Striking pictures by Edmund H. Garrett.

MARGARET SIDNEY'S new serial, "Five Little Peppers Grown Up," will tell more about Polly and Jasper and David and Joel and Parsonie and others, as it runs through the year. Fifty charming illustrations by Charles Monte.

MARIETTA'S GOOD TIMES will chronicle in her own words, from her own manuscript, the childhood adventures of Marietta Ambrosio.

MISS MATILDA AROCHAMBEAU VAN DORN, a little girl who had a great many ancestors, is an irresistible little folks' serial, by Elizabeth Camings.

UNUSUALLY INTERESTING ARTICLES, some elaborately pictorial:

"Dining with Gladstone," by Mrs. General John A. Logan; "Amy Robson's" Embroidery," by Frances A. Humphrey; "Mother Goose's Fats," by Agnes Koppeler; "Gypsies and Gypsying," by Elizabeth Robins Pennell; "Some Home that I have Known," by Maud Howe; "Sainte Marie College of Wychester," by Oscar Ray Adams; "Boston's Girl Sculptor," by Mrs. Newberry; "The Sugar Crank," by Theodora R. Jenness.

SOME PROBLEMS IN HOROLOGY, by E. H. Hawley of the Smithsonian Institution, Washington, will interest High School Students—three sets of Cash Prizes.

THE BEST OF SHORT STORIES from thousands offered and solicited the past year.

THE LANDING OF THE PILGRIMS, a facsimile reproduction of Felicia Hemans' famous poem, from the original MS., now in Pilgrim Hall, Plymouth.

FIGURE DRAWING FOR CHILDREN, in twelve illustrated lessons, by Caroline H. Rimmer, with four prize offers each month.

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Wide Awake is only \$2.40 a year.

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Scribner's Magazine

For the coming year will be noteworthy for a number of special features which the Publishers believe are of very unusual interest, and among them the following may be mentioned:

SIR EDWIN ARNOLD

contributes to the December number the first of a series of four Articles upon Japan, its people, its ways, and its thoughts. Mr. Robert Blum, who was commissioned to go to Japan for Scribner's Magazine, has prepared a very remarkable series of drawings to illustrate Sir Edwin's papers. Articles upon the recent Japanese Festival will follow, illustrated by Mr. Blum.

HENRY M. STANLEY

has prepared for the January number an important article upon "The Pygmies of the Great African Forest." Another contribution in this field will be Mr. J. Scott Keltie's account of the recent African Exhibition held in London. Both papers will be amply illustrated.

THE WRECKER.

a Serial Novel by Robert Louis Stevenson and Lloyd Osbourne, will run through a large part of the year. Illustrated by Hols. A two-part story by Frank R. Stockton will also appear.

PROF. JAMES BRYCE, M. P.

author of "The American Commonwealth," will write a series of Four Articles upon India, embodying the results of his recent journey and studies on this land of never-ending interest.

OCEAN STEAMSHIPS

will be the subject of an important series somewhat upon the lines of the successful Railroad Articles, "Passenger Travel," "The Life of Officers and Men," "Speed and Safety Devices," and "Management," are some of the subjects touched upon and illustrated.

GREAT STREETS OF THE WORLD

is the title of a novel collection of articles on which the author and artist will collaborate to give the characteristics of famous thoroughfares. The first, on Broadway, will be written by Edward Harding Davis, and illustrated by Arthur B. Frost. Others will follow on Piccadilly, London; Boulevard, Paris; The Corso, Rome.

The price of Scribner's Magazine admits of adding a subscription to one's other reading at very small cost. Orders should be sent at once.

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1891.
HARPER'S MAGAZINE.
ILLUSTRATED.

The important series of papers on South America, by THEODORE CHILD, will be continued in HARPER'S MAGAZINE during the greater part of the year 1891. The articles on Southern California, by CHARLES DUDLEY WARNER, will also be continued. Among other noteworthy attractions will be a novel by CHARLES EUGENE CHADDOCK; a collection of original drawings by W. M. THACKERAY, now published for the first time; a novel written and illustrated by GEORGE DU MAURIER; a novelette by WILLIAM DEAN HOWELLS; and a series of papers on London by WALTER BESANT.

In the number and variety of illustrated papers and other articles on subjects of timely interest, as well as in the unrivalled character of its short stories, poems, etc., HARPER'S MAGAZINE will continue to maintain that standard of excellence for which it has been so long distinguished.

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Menominee, Marinette, Oconto, Green Bay, Depere.	11:05 P. M. 6:20 A. M. 6:30 A. M. 2:30 P. M.	8:30 A. M. 6:55 P. M. 11:30 A. M.
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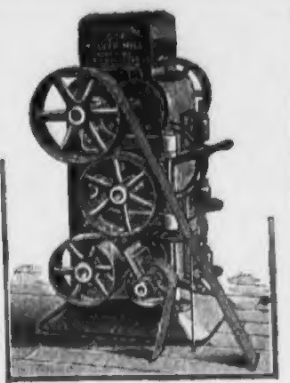
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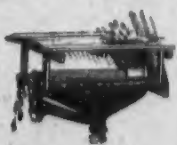
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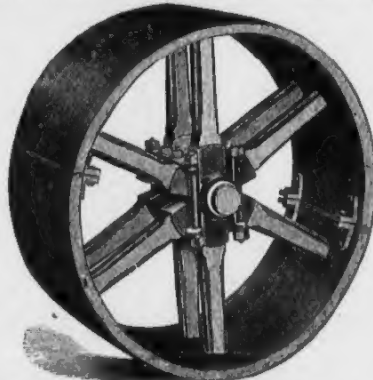
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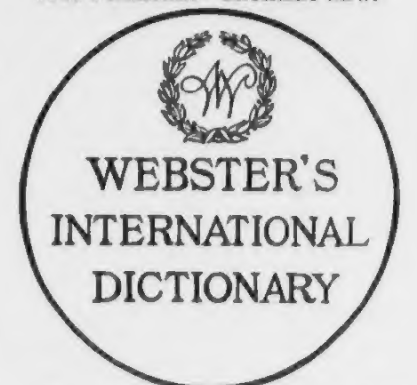
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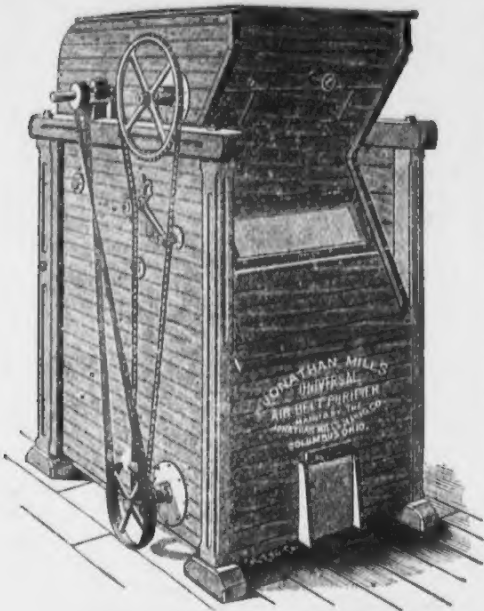
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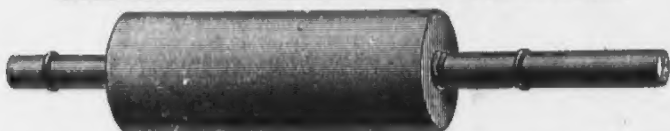
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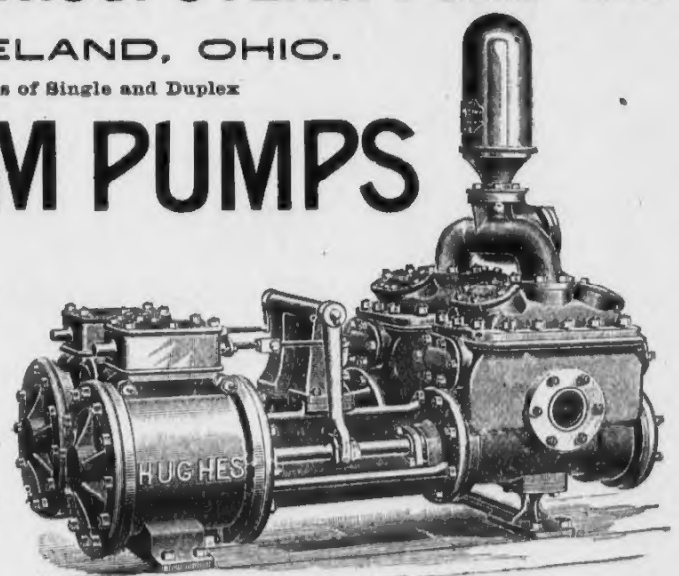
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